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From 'papaber errat' to 'tincture of opium': Poppies, opiates and pain in early modern Scotland, c. 1664 to 1785.

Introduction

Early in 1665 Donald Christie, the factor for the Laird of Glenorchy in the Scottish Highlands, received an invoice from Perth. As business manager for the Laird it was his job to settle the accounts and monitor the estate's expenditure. Sent by an 'apothocarie', Dr John Moray, it was a charge for medicines and medical services provided during the period from February 1664 to January 1665.

These included treatments as diverse as 'letting of blood' in late September, 'cordial tablets for the Lady' in November and 'oylls for the stomack' in April. Earlier in the year there were three orders made for one of the most powerful drugs available at the time, which could settle stomachs, induce sleep and reduce pain. 'Laudanum' was first purchased in February 1664 when 8 grains were provided. The term is applied to tinctures of opium in alcohol, a word thought to have first been first used in the early seventeenth-century. Evidently the 8 grains ran out quickly as in March the

order was increased to 10 grains and in April a further 12 grains were requested. Either the health crisis subsided, the patient or patients died, or the medicine was thought not to work as no further purchases were made that year. Whichever was the case, the recorded history of the use of opiates in Scotland had begun.¹

Historians of medicine that have looked at this period² in the British Isles usually mention opium preparations in their accounts, but on the whole they do so fleetingly and in passing. Charles Webster's landmark book, The Great Instauration: science, medicine, and reform, 1626-1660 published in 1975, contains only one reference to opium, but only in a discussion of critics of Roman medical texts. Roy Porter's Doctor of Society: Thomas Beddoes and the Sicktrade in Late-Enlightenment England is more typical as it mentions opium intermittently as a treatment for various diseases but does not provide any details. The book he co-wrote with Dorothy Porter, In Sickness and in Health: The British Experience, 1650-1850, notes that 'the Georgians eagerly seized upon opiates for their anaesthetizing properties'3 but does not linger on these medical uses as it moves on to contemplate the consumption of such substances for their psychoactive properties by the likes of Samuel Coleridge. Mary Lindemann's Medicine and Society in Early Modern Europe, which broadens the geographical scope, only includes three references to opium. These all seem important, mentioning its inclusion in plague remedies, its use as a painkiller and 'a lively curiosity about the useful plants of Asia' on the part of the 'European educated world', but the author does not elaborate on any of these points. The substance merits only a single mention in the recent Aphrodisiacs, Fertility and Medicine in Early Modern England by Jennifer Evans.⁵ The excellent Early Modern Recipes Online Collective blog includes eighteen references to opium, of which only one does more than mention it in passing.⁶ In a discussion of treatments for gluttony, Carla Cevasco notes that

For those unable to heed injunctions against overeating, many recipe books offered remedies for "surfeit." A recipe "To Make Poppies Water which is Good for a Surfeit," in Wellcome MS 4054, called for soaking "Corn poppys," marigolds, gillyflowers, sweet marjoram, angelico root, raisins, licorice, aniseeds, white sugar, and rosasolis in aquavitae, then straining and bottling the resulting cordial. John Gerard's Herball or Generall Historie of Plants noted that "black Poppy drunketh in wine" stopped diarrhea; in addition, the opioid content of distilled poppy flowers or leaves would have eased the pain associated with indigestion (400-401).

In conflating different types of poppy the assumption seems to be that they are all the same. This article will suggest that perhaps one of the reasons that poppy-medicines should be taken more seriously by historians of health and medicine in this period is that they are not.

Others have looked at the growing market in Britain for the 'useful plants' of Asia within the circulation of medicinal products around the world that developed in this period, and yet they too have paid little attention to opium. In his Medicine and Empire: 1600-1960, Pratik Chakrabarti includes opium in a list of 'plants and herbs from different parts of the world ... [that] became effective and highly popular in European medical practice'. However, he mentions it only briefly two more times in the book. Patrick Wallis similarly notes opium in passing when looking at the English drugs trade, and while he observes that it was one of a number of substances that became cheaper there between 1660 and 1800, he is more interested in imports of Jesuit's Bark or chinchona. Overall, the impression is that opium is much noted in the historiography of early modern medicine in Britain and the international networks in which it operated, but rarely the focus of research. It is as if opium has been hidden in plain sight.

Those that have focused on histories of opium itself in Britain have not been particularly interested in this period. Virginia Berridge's pioneering account starts in the nineteenth-century and pays no attention to what went before. Martin Booth's effort does touch on some publications from the period that include discussions of the drug, but it does so in a rather haphazard manner, repeating stories about the Thomases Sydenham and Dover and making entirely unsubstantiated assertions such as 'the widespread use of opium produced a comparatively large population of addicts from the Middle Ages onwards'.⁹

Historians of medicine in Scotland have focused more attention on opium. Guenter Risse's history of medicine during the Scottish Enlightenment notes that the uses and effects of opium were recurring subjects for medical men in Edinburgh in the eighteenth-century. His is more an intellectual history though, and the article traces debate among the city's scientific elite rather than its applications in practical therapeutics, as does a later, more detailed article by Andreas Holger-Maehle.¹⁰

This article will place opium in early-modern Scotland at centre-stage. It does so for two main reasons. The first is to trace the neglected narrative of when opiates began to be used in the British Isles and for what purposes. Scottish archives are a rich, but often underused, resource for doing this. A distinct legal system, an often separate political establishment, and the emergence of a vibrant medical culture across the period discussed here have left a wealth of materials behind for tracing such a narrative. At the same time a shared political, economic and social history with other parts of the British Isles allows for conclusions from Scotland to be drawn into the picture of what was happening across Britain between c. 1664 and c. 1785. The second reason for placing opium in early-modern Scotland at centre-stage in this article is to examine just why people consumed it in

this period. In other words, it promises to provide fresh answers to questions first posed in 2007 about 'How Enlightenment Europe Took to Soft Drugs'.¹¹

Apothecaries and accounts

It is in apothecaries' bills and the accounts of the landed estates of early modern Scotland that historians can first glimpse opiates in action around Britain. 12 While medical treatises lying in the libraries of the nation's colleges and universities may have included references to opium these would have drawn upon gleanings from classical references rather than practical experiences. 13 But John Moray's invoice shows that opium-based substances were repeatedly used in the medical treatment of at least one household of the country's elites during this time. The Laird of Orchy in 1665 was John Campbell, one of the most powerful nobles of the seventeenth-century in Scotland. 14 The invoice shows that on a monthly basis the household could order anything between two and eighteen different products. Common items included 'materialls for emulsions', which is as mysterious as it is vague given that emulsions are any liquids where one substance is held in suspension by another. Another was 'cinamon water' which was used in this period for unsettled stomachs. 15 Quite why the Laudanum was ordered early in 1664 is not made clear but the items purchased at the same time offer some clues. 16 In February 'asstringent powder' and a syrup containing rhubarb appear on the list, as well as a quantity of raw rhubarb. All of this points to some sort of severe gastric complaint as rhubarb preparations were commonly used to tackle these because they have both laxative and astringent properties. Whatever was in the 'asstringent powder' was likely to be aimed at digestive problems too. The opium in Laudanum means that it was often deployed for its constipating effects, and also to reduce pain or to encourage sleep. The three batches ordered in relatively rapid succession, followed by the disappearance from the

shopping list, points to a bout of digestive disorders that eventually passed. Laudanum, in this case at least, seems to have been used to deal with a particular episode of ill-health rather than as a stock substance kept on the premises and doled out routinely.

The Laudanum provided does not appear to be exorbitantly expensive when compared to other items on the list. Ten grains of the substance cost £2, the same as those 'materialls for emulsions' and a little cheaper than a batch of cinnamon. The problem is in understanding how much of each was being provided for this sum, as quantities were not systematically recorded on the invoice.

Rather more expensive however was the order for 'syr: papaber errat' mixed with other ingredients, as six bottles cost £5 and 12 shillings. The order was placed on the 19th of March and within a week it was repeated. 'Papaber errat' is seventeenth-century apothecary-speak for wild-poppies, the red types that grow in British fields and hedgerows from the Spring-time onwards. Now called Papaver rhoeas the plant contains various alkaloids that can be used for analgesia-sedation purposes but which lack the potency of codeine and morphine which are found in Papaver somniferum (white poppies). For example, the alkaloid rhoeadine acts on at least three opioid receptors and therefore can be considered an opiate, ¹⁷ although noone used that term in the early modern period. ¹⁸

This suggests that the household was buying two different types of opium-based product, Laudanum which was prepared from the imported white poppies and a syrup made from the red ones which were available locally. The former was far more potent but the latter's relative mildness could be useful too, not least as this would have made it safer when administered. Although speculative, it is worth noting that a quick glance at the lineage of the Campbells of Glenorchy shows that there was a baby in the house, a fifteen month old John Campbell who had been born late in 1662 and who was to succeed his father almost forty years later. ¹⁹ Interestingly such a glance also reveals that

there was an older child, Duncan Campbell, who did not succeed his father because of what historians have called his 'incapacity'.²⁰ Not enough is known about Duncan to draw any safe conclusions about the deployment of a mild sedative in a family dealing with some form of disability or perceived mental illness in their eldest son. But knowing that there was an infant around makes the reader wonder whether 'syr: papaber errat' was being used in much the same way as today's parents turn to Calpol²¹ when the crying gets too much.

The family were not alone in using such preparations at this time. A bill for an order placed with J. Hall in Glasgow by Lady Buchanan in 1665 was finally paid in 1667. Among the eleven items delivered were a syrup made from 'popie' which cost eleven shillings, one of the least expensive items on the list. The document provides few clues as to why it was ordered, what it was used for or even whether the poppy in question was red or white.²² A glimpse of a different experience of opiate-based medicines from the turn of the seventeenth-century supports the idea that Laudanum-like preparations were bought during episodes of stomach disorders. Across November and December 1700 Colin Campbell, the local laird in Glendaruell, received multiple batches of medicines from John Baillie of Edinburgh, a 'chirurgeon' (or surgeon). In that two months his household consumed over fifty Scots pounds worth of medicines which included repeated orders for 'the syrupe of White popies'.

It is possible to trace the household's therapeutic journey using a bill sent by Baillie in which he carefully noted the dates on which new supplies were despatched. The story starts on 16th November when '4 ounces' of the concoction were purchased at a cost of 1 pound, 5 shillings. This would have been purified water to dilute the syrup for consumption. More syrup was ordered on the next two successive days after which there was a pause. It seems that Baillie was closed at

weekends. By Tuesday 23rd fresh supplies of the syrupe were being added to the bill, and on the 24th the largest batch of 6 ounces was provided. This was the final delivery made of the syrup although medicines continued to be sent until December the 10th by which time a 'purging powder' was being issued.

In just over a week Colin Campbell ordered 'syrupe of white poppies' seven times and water to use with it twice, at a total cost of almost ten Scots pounds. Then the orders abruptly ceased. It seems that the substance was being used for a specific purpose and to deal with a particular health crisis. The other products ordered during this week support the idea that stomachs were strained. Both 'spirit of hartshorn' and 'rasped hartshorn' were included in the packages put together by Baillie, as was 'Cinamon water'. Hartshorn is made from the antlers and hooves of red deer and is a source of ammonia. It could be prepared in various ways to treat diarrhoea and dysentery, and to induce sweating in fevers. Cinnamon was commonly used to settle stomach upsets and although sourced from abroad and an exotic product, it had been in use in the Campbell family since at least 1631when two ounces of 'cannell' were sent to the castle at Glenorchy.²³ With the introduction of 'purging powders' into the medical regime by December 10th it looks as if the treatment had reached a new phase. The administration of hartshorn and opium syrup had been designed to bring loose bowels under control and to reduce the discomfort and sleeplessness associated with an acute stomach disorder. It looks like the most serious symptoms had passed after a week or so of treatment, and once stomachs had settled a course of purging was followed to clear out any lingering toxins or sources of illness. The 'syrupe' had been central to the process of steadying upset stomachs but was not required after that point.²⁴

The bills contained in this file are also useful as they provide more clues as to how precious a commodity opiate-based medicine could be. The charge for four ounces of the opium syrupe was one pound and five shillings. On the same bill four ounces of cinnamon water cost fifteen shillings, about three-fifths of the cost of the syrupe. Four ounces of 'cooling spirit' cost two pounds though, so this was more expensive than the preparation of opium. By way of context, a grocer's bill from 1706 in the same bundle gives a sense of how much other imported commodities could cost at the time. One pound of sugar could be had for only eighteen shillings and two ounces of nutmeg were priced at one pound and four shillings. A pint of brandy (or twenty ounces) set back the household two pounds. In contrast a pint of the opium syrupe (or the 'cooling spirit') would have cost six pounds and five shillings. Without knowing precisely how much opium was in the syrupe it is difficult to say exactly where raw white poppy products sat in the price range for imported products used in medicine. But this file suggests that while they sat in the upper end of that range they were by no means so expensive that they were beyond the reach of wealthy households. When the Campbells of Glendaruell needed to access it during a health crisis in 1700, they were able to do so regularly and for as long as it took to restore balance to their digestive systems.

One of the challenges of working out how much poppy-based medicine was being used in this period comes in establishing what was in some of the mixtures that appear on the apothecaries' lists and invoices. The Earle of Breadalane's bill from Mr James Smyth, an apothecary in Perth, for the period from August 1716 to November 1716 was just over £234 for sixty-three items. Among the items was a 'bottle syrup of poppies' which cost eighteen shillings and 'a bottle of liquid laudanum' which was priced at twelve shillings so it is possible to say for sure that opiates were on the list. The most expensive single item of the eleven products bought on October 2nd which cost one pound and twelve shillings was a 'glas of strong balsam with camphor and opium'. Balsams are regularly included on such bills and often there are no details of exactly what they consisted of so this is a rare

example where it can be stated with certainty that opiates were among the ingredients. There is no knowing what other mixtures were made from though, but they may also have contained opium extracts. For example, one item that was bought on multiple occasions in this period by the Earl's household was 'an hysterick mixture in a glas' which cost one pound and ten shillings. ²⁵ It is not possible to say what was in that particular container, but clues can be found in a recipe for just such a mixture that was published in a book that very year. 'A rational account of the natural weaknesses of women: and of the secret distempers peculiarly incident to them. Plainly discovering their nature, true cause, and best method of cure, ... By a physician' was a detailed seventy-nine page volume that considered female health and which covered everything from menstruation to miscarriage. The book even included a substance for driving out 'all supperfluous, cold, moist Humours, which deaden Desires to Matrimonial Pleasure, and thereby destroy even the very intent of that Divine Institution', which put more simply was an aphrodisiac containing 'English Saffron well pickt' and 'Tartariz'd Spirit of Wine' together with various powders and chemicals to be taken every morning and night with white wine. For a month. ²⁶

The 'hysterick' mixture was not designed for treating 'hysteria' or 'hysterics' as in behavioural problems or disruption. The word 'hysterick' had its roots in the Greek word for 'womb' and was used by physicians in this period to refer to all conditions that they related to that part of the body, including some psychological disorders.²⁷ The author's concoction was to treat period pain, or as he put it 'the exceeding Pain and Uneasiness some Women endure just upon the coming down of their Courses'. The approach was straightforward, and involved taking up to eight spoons of the 'hysterick julep' as soon as pain was encountered and taking to bed straight away to keep warm. The dose could be repeated every three hours. Both mugwort water and syrup of mugwort were in the concoction, unsurprising given that the plant has long been considered an emmenagogue or substance useful for stimulating menstruation.²⁸ So was 'liquid Laudanum, forty Drops', along with

various other ingredients including cinnamon water and the physician's own special ingredient 'my Specifick Tinctare two Drams'. With such a generous dash of opium tincture in the medicine, it is little wonder that the author confidently stated that 'This Hysterick Julep will absolutely take off all Manner of Pain and Uneasiness, cause pleasant Rest and Sleep, support the Patient's Spirits [and] strengthen her Stomach'.²⁹

Recipes and remedies

While pamphlets like this are useful in tracing medical thought in the period, it is in the collections of recipes and remedies passed down from generation to generation in Scotland's families that historians can get closer to what was actually in use and how it was prepared.³⁰ Just what poppy syrupe would have consisted of is suggested by a recipe written down by a member of the Clerk family of Penicuik. John Clerk was a merchant who made his fortune trading in France and who used the proceeds to buy an estate in Scotland in 1647. Successive generations established themselves there and were active members of the country's political and business elite, his son becoming a Baron of the Scottish Exchequer in 1708, and later descendants included a founding member of the Royal Society of Edinburgh and a Lord of the Admiralty.³¹ The papers and documents that have survived from their dealings show a keen interest in business, politics and the improvement of the estate. They also show a wide-ranging concern with health. Eighty-three recipes for medicines and therapeutic concoctions can be found in a bundle that was gathered together across a century or so. Not all the papers are dated so it is impossible to know for sure when the collection was started or when it came to an end. The earliest paper that is dated is from 1666 and is a treatment for 'scrubie', or scurvy. The latest date scribbled on one of the recipes was 1783, for 'stones' which were to be tackled with 'one ounce of sweet spirit of nitre and a pint of simple oyster shell lime

water' a quarter pint of which was to be taken four times a day and to be 'continued for a length of time'.³²

The bundle provides a view of the wide and varied range of substances deployed in pursuit of health over the course of the seventeenth and eighteenth centuries in Britain. Some notes acknowledged the source of the recipe in their title. A 'Cure from the Ague from Mrs Dalrymple' included a list of exotic constituents, including chinchona bark, Jamaican pepper and molasses. This was to be eaten in a ball and washed down with a draught of warm ale after the symptoms of the fever had passed. A 'recipe against buggs' was copied 'from the London Magazine' in 1735 and involved mixing quicksilver with eggs and smearing it on the seams of bedsheets, while 'Dr Boarham's recipe for worms' included French brandy and bruised garlic which was to be taken every morning for nine days after which a dose of salts would evacuate the parasites. Other papers in the bundle offer no clues to the origins of the recipes recorded, one of which can be found on a scrap of paper with 'Syrup of Poppies' neatly written on the reverse. It unfolds to reveal a recipe that sounds like considerable time and effort would be required to make it.

Take white poppy heads dried and free of seeds, 7 ounces, cut the heads small and boil them in 6 English pints of water, stirring them often, till only one third of the water remains, which will be almost entirely soaked up with the poppies. Then strongly press out the liquor and boil it down, slowly to about half a pint, strain it whilst hot through a fine woollen cloth and boil it with 12 ounces of fine sugar slowly till it weigh [sic] 18 ounces or a little more. Do not cork it till it is cold, and let it stand very cool.

While it was undated another one of the bundle's contents hints at why the family might have been keen to keep such a recipe at hand. A printed advertisement had the title 'The Method of Curing the SMALLPOX. First written in the Year 1704 for the use of the Noble and Honourable Family of MARCH. By Dr ARCH. PITCAIRN'. Smallpox was one of the great horrors of the period and historians have suggested that in the eighteenth century the disease accounted for up to fifteen percent of all deaths in some European countries, with eighty percent of the victims being under ten years of age. Even those that survived it often suffered its effects for the rest of their lives as it could be disfiguring and debilitating because of the damage caused to tissues in the body. It was not until the end of the eighteenth-century when Edward Jenner devised a vaccine that the threat of smallpox began to subside and even then it remained a significant infection well into the nineteenth century.³³

Pitcairne's detailed instructions related almost entirely to the treatment of children, unsurprisingly given that smallpox was particularly fatal in the young. His regime started with the use of 'Loch-leeches' for bleeding the victim as soon as symptoms appeared which could include loss of appetite, drowsiness, a fever or a cough. 'Mean-time, give the child a spoonful of syrup of white poppies at night, and in the Night-time, ay till sleep or ease comes' was his advice for helping the patient get some rest. Once the fever passed and the pox or swellings began to appear 'a handful of sheep's purles' was to be steeped in purified water for up and then administered once every five hours. This was to be sweetened with 'syrup of red poppies' and at night the administration of the white poppy version was to be continued. All of this was to be increased in the event that the swellings appeared on the face. Around the eighth day came a crucial moment 'give the child to drink of Barleywater, sweetened with syrup of white poppies; this will make the child spit, which saves the child'.

In the event that the disease loosened the bowels Pitcairn's advice was once again to turn to opiates; 'stop it with syrup of poppies, and five or seven drops of liquid Laudanum given now and then till it be stopt'. Should the swellings prematurely disappear then the sufferer was to be blistered and treated with a fluid that contained various ingredients including water, wine and figs. Together with white poppies and Diascordium (which could contain opiates). Once the disease had passed, various ointments and drinks were recommended to enable the patient to cough up whatever was on the chest. Diascordium and 'Poppie Syrup' were once again included in these.

A date hand-written on the back of this paper suggests that it was added to the family trove of useful remedies and medicines in 1712. It shows that various opiate substances, either in syrup form, in other substances or even in their raw state, were central to each stage of the treatment for one of the most terrifying epidemic diseases of the period. It is worth stating that this would not have been regarded as a quack remedy at the time. Pitcairne was one of Edinburgh's most respected medical men of the period. He was one of the founding members of the Royal College of Physicians of Edinburgh and was appointed Professor of Medicine at the university there. His 1704 advertisement was a salvo in a controversy that had been developing for over a decade. In 1693 Andrew Brown, a follower of Thomas Sydenham who had produced his own brand of Laudanum in the 1660s, advocated a new method of treating fevers with bloodletting, purging and Laudanum. Such an approach was rejected by traditionalist Edinburgh physicians at that time, whose alternative was based on vomiting and sweating. As College Censor, Pitcairne was expected to defend the orthodoxies treasured by many of its members but he failed to do so and became a supporter of the new method. This was one of the reasons that he was excluded from the College and went on to join the Incorporation of Surgeons in the city in 1701.³⁴ The inclusion in the Clerk family's archive of useful therapies of his recommended regime for smallpox suggests that someone in the family clearly sided with his approach.35

If the Clerk family recipe shows that households could manufacture their own white poppy substances then an example from that of Broughton family of Wigtownshire seems to show that the local flower was also put to use in households. The Broughtons had been based in what is now Dumfries and Galloway since the sixteenth century. They owned land there and also in Ireland and regularly represented their Scottish estates as the local MP.³⁶ In the collection of their materials at the National Archives of Scotland, paper 26 was labelled 'To make poppy cordials' and at the foot of the recipe was the note 'This is very good for any disorder in the Stomach'.

Take two gallons of brandy, a peck of corn poppies (or ten chapns), pick them clean from the stalks, steep them in your brandy two or three days, take an ounce of mace, an ounce of cloves, an ounce of nutmegs, pin-bruise them, and put them into a little plain brandy to steep, take mint, Balm, Angelica, and Card., of each one handful, distill them with the poppys, when strain'd from the brandy, together with the spices, mix the produce with the brandy the poppys were steep'd in. Add to this two pounds of double refin'd sugar, when the sugar is dissolv'd bottle it up³⁷

This potent brew would have required some effort to make given the weights and measures involved so it is likely that servants in the household were those who were making these 'syrupes' and 'cordials' for the use of the estate owners. This raises the question of whether the staff also used them. One interesting feature of some of these materials at the National Archives of Scotland is the evidence that access to medicines and remedies was one of the benefits of working for the well-to-do. An 'Account of some small debts paid for the Earl of Breadalbane' is a collection of bills settled over the decades by successive factors for the men who inherited the title over the course of

the eighteenth-century. One such bill was paid in 1700 to a John Baillie of Edinburgh for medicines bought in the period between 1693 and 1699. There was some detail about who was on the receiving end of the various substances that were provided, 'to my lord half a pound of plantain in water' for example, or 'rosewater for my lady'. It was not just family members whose needs were being met by supplies from the capital though. On the list were 'purging pills for the maid' and 'diapalma for the butler'. Remarkably, a similar bill survives in the file from almost eight decades later, in 'Account due by Breadalbane to John McLagan, surgeon'. The latter had supplied

Two sweating powders for Tibby, Roman vitriol for the butcher, hiera picra for the smith, a glass discussing mixture for the fowler, two doses of salts for the gardener, a glass camphorated oil for Jenny Doer, quicksilver for the overseer, two doses of physic for the cook etc.

While neither of these lists specifically mentions opium or preparations that contained it, they do show that the drugs being ordered by aristocratic households were not exclusively for the use of family members. This evidence shows that employment by one of Scotland's elite families could bring with it the benefit of medical treatment for servants throughout much of the eighteenth-century and as such staff would have had access to preparations of poppy. It was not just the employees of the Earls of Breadalbane who enjoyed this benefit either. In February 1772 'borax for the smith' was provided by Thomas Duncanson at Forres to the Grant household at Castle Grant in Grantown-on-Spey.⁴⁰

Another source which suggests that opiate use for medical purposes may have extended beyond the elites in this period is its appearance in a book published in 1712 that purported to be specifically for

those of modest means; 'Tippermalluch's receipts. Being a collection of many useful and easy remedies for most distempers. Written by that worthy and ingenious gentleman John Moncrief of Tippermalloch: and now first publish'd for the use of all, but especially the poor'. Its author was a physician who was born in 1628 and, as if he was living proof of the efficacy of his wares, lived to the fine age of eighty-six. He was a member of the Moncrieff clan, an aristocratic family based in Perthshire, and his longevity explains how he ended up as the fifth Baronet of Moncrieff. By the time he was seventy he had outlived all three of his cousins who held the title and seem not to have had any male heirs. 41

The publisher's preface made clear that the author 'hath not taken these things on trust, till he had confirmed them by experience, and so left them for the use of the poor, for whom his Charity mainly designed them; That as he has been useful to them in his Life, he might likewise in some Measure provide for them after his Decease'. Evidently the concoctions had been tried out on those of limited resources and had proven to be satisfactory to the clientele. The book provides a fascinating glimpse of the practices of a doctor whose career spanned the second half of the sixteenth and the start of the seventeenth-century. Needless to say many of the remedies sound terrifying. A rotten tooth was to be filled with turpentine and burnt with a 'red hot Iron', sciatica was to be tackled with blood taken from the ankle of the same leg, while pestilence could be treated with 'the patient's dung, distilled with the patient's urine, strained through a linen-cloath and drunk'. If nothing else these treatments were certainly cost effective. 42

In one hundred and fifty-two pages of such recommendations, poppy-based medicines are only directly mentioned twice. In the section devoted to conditions associated with the head Moncrieff dealt with headaches, sun-burn and lice, as well as ailments that would now be considered

psychological. His treatment 'for the frenzie' followed one for 'lethargie' for which the patient had to consume the skin of a hare 'with the ears and nails' but only once it had been burned to ashes, the powder of which was to be consumed while still warm. 'Frenzie' is not described so it is difficult to work out exactly what sort of condition Moncrief was referring to but it seems to have been violent as the instructions included 'bind the arms, legs and hands strongly, until the patient find some pain in the binding'. The advice continued 'Likeways cause him smell Camphire, Henbane, Saffron, *Opium* or Henban sodden, or decocted in Mulse & incontinently he shal be quiet'. Preparations of these plants were all thought to have a calming effect and opium, of course, is a sedative. Once the 'frenzie' had passed, the victim was to have his head shaved, the scalp covered in mint boiled in vinegar, and a drink of henbane in wine to encourage sleep.

The second entry that contained a reference to preparations of poppy was a treatment 'For a Canker in the Duggs'. Canker usually means ulcers and duggs is a word for female breasts so it seems that this was a remedy particularly for women. This is tucked way towards the end of the book, by which point there seems to be no particular order to the entries so that this one sits between 'tumore of the face' and 'gangrene in the Leg'. For the canker it was recommended to prepare 'Water of red Poppie, Plantice and Roses, mixt [sic] with Honey and Roses'. This was simply to be 'applyed'.⁴⁵ The use of the local poppy would certainly have ensured that this was an inexpensive concoction to put together, and the various constituent parts made a certain sense as honey and roses have long been considered anti-inflammatory while the extract from the red poppies could have produced an analgesic effect.

The book must have been a success as a second edition was produced. It came out in 1716 and was extolled by its publisher as an improved version, 'very much enlarged and corrected' and had a

snappier title that drew sharper attention to what must have been seen as its chief purpose, 'The Poor Man's Physician'. The rather longer subtitle 'The Receipts of the Famous John Moncrieff of Tippermalloch Being a Choice Collection of Simple and Easy Remedies for Most Distempers, Very useful for all Persons, especially those of a poorer Condition' also emphasised the point. The publisher's preface was keen to emphasise that everything included in the pages of the book had been tested through 'tryal and examination'. It promised twice the number of remedies and was two hundred and thirty three pages long. Among the new recipes was one for epilepsy which required 'Powder of a Man's Bones burnt, chiefly of the Scull that is found in the Earth'. ⁴⁶

There were certainly more poppy medicines in the revised edition. The entry on 'canker in the dugs' was still there, while that on 'frenzy' [sic] was expanded. It advised that the patient 'smell' opium as before, but 'anoint the Eyes, Nose and Lips with Myrrhe taken in Rose-Water, and the milk of *Papaver*, - of Opium, -of Henbane, boiled in Mulse, and incontinent he shall be quiet and still' had been added, perhaps to make it clearer that opium was to be included in the Mulse and that the latter was to be applied rather than smelled. The entry went on to state that there was another new stage in the treatment, 'Take two Drams of Opium, three Ounces of Wheat, bruise them with Honey and Vinegar, anoint all the Pulses therewith. And he shall be quiet and still'. Other suggestions for dealing with the condition had been added too, 'applying Leeches to the Veins of the Fore-head, is wonderfully good' it was asserted.⁴⁷ The section on gout had been significantly expanded in the second edition. A separate entry for 'Gout in the Feet' was included and if the patient was suffering with it then 'one Dram of Opium, pulverized with Saffron, Yolks of Eggs, and Oyl of Roses, mitigates the Pain, and beats back the Matter'. This sounds significantly easier to swallow than another of the possible remedies offered, 'Goats-Dung, mixt with Swines-seam, cureth the Gout'.⁴⁸ Swines-seam is pig fat.

Laudanum was included in the book for the first time too. One simple recommendation was 'Laudanum anointed, multiplieth Hair', although 'Ashes of little Frogs' was mentioned ahead of it in the list of ways to tackle hair loss. ⁴⁹ At the other end of the body the substance was also thought to be of use, in tackling infertility. The entry invoked one of the Latin authorities in stating that 'Dioscorides saith, Laudanum put in, emplaistered and suffumigate heateth much an overmoist and cold Mother; wherefore it is said with the smell thereof to beget Children with the Chaste'. ⁵⁰ As these instructions are far from clear it is difficult to imagine that the technique was regularly used. The most references to opium, laudanum and poppies came in an appendix that has been added to the second addition. In the publisher's preface he explained that 'we thought we could not do a better Service to the Publick, than to subjoin to these the Method two very common and almost Epidemical Diseases, the Smallpox and Scurvy, written by that great Ornament of his Country, and incomparable Physician, Dr Archibald Pitcairn'. ⁵¹ It seems it was not just the Clerk family mentioned above who approved of the latter's controversial new approach to smallpox.

However widespread the use of poppy-based medicines before 1800, it seems that among those who had some experience of them caution in their deployment was deemed wise. James Campbell was the son of John 'of the Bank' Campbell, one of the founders of the Royal Bank of Scotland.

James had qualified as a surgeon and would go on to serve in India, so wrote with some authority when he contacted his brother-in-law late in the 1780s about the health of his sister Mary.⁵² He was obviously concerned about her, and the toll that her condition was taking on his brother-in-law, as the opening sentence reads 'It grieves me much to hear that my dear Mary has been rather unwell for some time but I assure you I am not so much concerned upon her account as her situation is common and its to be expected but I am sorry upon your account as you may naturally be alarmed when there is little reason'. Quite what was wrong with her is never made clear but she may well have been enduring a condition related to pregnancy given that she had six children in fifteen years

and that her ailment was dismissed as 'common' and to be expected. This is consistent with his next sentence 'I delayed writing you till now because you would naturally expect some medical advice and it is the opinion of several physicians, whom I have consulted, very experienced in these matters that very little ought to be done and a great deal left to nature in that she must endeavour to bear her complaints with some degree of patience'. While the medical men of the time seemed to agree that endurance was the best approach Mary's female relatives seem to have been less sure, and more keen to find a guick and easy therapeutic intervention. His letter went on to state that

Jean wrote her mother desiring to know whether she might try Opium. This certainly will give temporary relief but it is a <u>bad practice</u> for if once begun it will be found necessary to continue it if opium can be dispensed with it will be much better but when the pains are very troublesome she may be allowed a small quantity- you may mix an equal quantity of the tincture of opium and of the spirits of Lavender, suppose an ounce of each and give her 60 drops which make thirty of Laudanum you may increase it if necessary.

The patient's elder sister evidently felt that Mary was suffering to the extent that something had to be done. That something was the administration of an opium concoction designed to act as an analgesic. James Campbell's nervousness about this line of treatment is very clear though and he was careful to state that it would be best not to resort to it. His concern hints at an awareness that using substances based on opium carried with it a risk of becoming reliant on them. It appears that while opium medicines were used among Scotland's wealthy families and sometimes recommended by their doctors there was a recognition by the late eighteenth-century that large doses or regular recourse to them could result in a desire for them and a habit of taking them.⁵³

Conclusion

Scotland experienced significant change over the period covered in this article, as greater integration into the British state, the economics of empire, and the cultural and intellectual forces of the Enlightenment impacted on those who lived there. The limited number of sources traced in this article makes too strident a set of generalisations unwise. However, it is clear that some patterns emerge from across the period and the archival materials which address the issues raised in the introduction. The first conclusion relates to the narrative of the use of poppy-based medicines in Britain. It appears that during the period under consideration preparations of both the local red poppy and the imported white poppy were recommended for medical use in various concoctions and for a variety of ailments. This seems significant for two reasons. While comprehensive research into medieval use of poppy medicines in the British Isles remains to be done, it is tempting to argue that use of the local red poppy paved the way for the introduction of medicinal white-poppy preparations. In other words, familiarity with a plant that grew in fields and ditches across the country would have established an awareness that poppies could yield analgesic and sedative substances which set the scene for the arrival of more potent varieties from abroad. In this light, the inclusion of white-poppy extracts in medical practices in Scotland by the middle of the seventeenthcentury looks less like a sudden enthusiasm for a new wonder drug and more like a ready acceptance of a more potent version of what was already familiar and used widely. The use of local red-poppy products in medical practice in Scotland carved out the market for the white-poppy extracts when, as Wallis has pointed out, they began to pour into the British Isles in the seventeenth-century.54

The second point is that the arrival of these white-poppy extracts does not seem to have displaced red-poppy substances from the medical marketplace or rendered the local plant obsolete or irrelevant in healing strategies. Instead, what seems to have happened is that medical practitioners and consumers recognised the increased potency of the imported poppy while remaining alert to the benefits of the local plant's milder effects. The use of both sorts in successive months at the house of the Laird of Glenorchy in 1664, or the inclusion of each in Archibald Pitcairn's treatment regime for smallpox, point to the integration of white-poppy products into medical practices alongside the red strain.

Of course, historians have long been exploring the arrival of new medicines in early modern Europe. Scholars such as David Courtwright, Jordan Goodman and Wolfgamg Schivelbusch pioneered this work, and reached similar conclusions along the lines of 'novel psychoactive substances ... began their careers as exotic medicines [in Europe], about which physicians made heated claims and counterclaims.' Goodman has examined this process in most detail, albeit without reference to opium specifically, and he concludes that 'tea, coffee, chocolate and tobacco were commercial capitalistic substitutes for indigenous European drugs, or 'vegetable substances', as they were called', elsewhere adding that

That tea and tobacco and less so coffee and chocolate were being recommended as alternatives to formulations prepared from indigenous plants is highly significant in the history of the consumption of these commodities.⁵⁶

The account given here of opium in early modern Scotland points to a more complex story than this.

If a familiarity with red-poppy medicines paved the way for white-poppy ones, and the two co-

existed in the same market into the eighteenth-century, then the introduction of the latter appears to be less of a substitution and something more nuanced; the gradual integration of new varieties of product into existing practices and knowledge established by an indigenous variety. This would disrupt the idea that Europe suddenly 'took to soft drugs in the Age of Enlightenment'⁵⁷ as continuity appears to enter the picture; 'exotic' white poppy-medicines were adopted and adapted by those used to working with preparations made from the red ones. If white-poppy products seemed simply like more potent versions of the more familiar red ones, then it is tempting to wonder if tea and coffee found markets because they were similar to, if maybe stronger or quicker acting than, infusions already in use made from local flora. Perhaps tobacco became popular as smoking leaves seemed familiar from existing practices of inhalation in medicine.⁵⁸ Further research into the ways in which 'exotic' psychoactive medicines were actually used and deployed will be important in establishing just how far continuities, rather than sudden change, explains how such substances found markets in early modern Europe.

A final point might also be made related to the psychoactive history of Scotland. As noted above Roy Porter's attention was only caught by opium in eighteenth-century Britain when he discovered that Coleridge and others were using it for purposes of intoxication, seeking in it inspiration and other-wordliness to enhance their poetic imaginations. Courtwright, Goodman and Schivelbusch all noted that market for the 'exotic medicines' in modern Europe quickly became driven by a desire for novelty and pleasure rather than something more strictly medical, as consumers sought to use them for their stimulating and psychoactive properties. Phil Withingon has viewed this process from a different perspective, that of changing 'cultures of intoxication' in the period.⁵⁹ In none of the sources used above is there any evidence of this use for recreation or intoxication in Scotland by the end of the eighteenth-century. Instead, the archival materials point to the rigours of stomach disorders, cycles of menstruation, the agonies of smallpox or some other suffering in explaining why

consumers, patients and doctors took to white-poppy products and continued to seek the red ones.

It was pain, and not pleasure, that drove those living in Scotland to seek out opiates in the two centuries after 1600.60

¹ This account taken from NAS GD112/15/9, papers 59 (food bill) and 60 (apothecary's bill). Helen Dingwall has pointed out that opium was listed in the inventory of an Edinburgh apothecary as early as 1575, but it is not clear that anyone bought it. See H. Dingwall, Making up the Medicine: Apothecaries in 16th and 17th century Edinburgh, Caduceus, 1994, 10 (3), p. 124.

² For the most part, this article will stick with the term 'early-modern' in describing the period covered as it is accepted as a shorthand for the seventeenth and eighteenth centuries by historians of Scotland. See K. Bowie, 'Cultural, British and Global turns in the history of early modern Scotland' in The Scottish Historical Review, xcii, 2013, pp. 38-48.

³ R. Porter and D. Porter, In Sickness and in Health (London: Fourth Estate, 1988), p. 219.

⁴ M. Lindemann, Medicine and Society in Early Modern Europe, (Cambridge: Cambridge University Press 2010), p. 116.

⁵ Jennifer Evans, Aphrodisiacs, Fertility and Medicine in Early Modern England, (Boydell & Brewer Ltd, 2014), p. 10.

⁶ The resource is organised by 'an international group of scholars interested in the history of recipes, ranging from magical charms to veterinary remedies'. It was founded in 2012, see https://recipes.hypotheses.org/

⁷ P. Chakrabarti, Medicine and Empire: 1600-1960, (Palgrave 2013), p. 20.

⁸ P. Wallis, 'Exotic drugs and English medicine: England's drug trade, c. 1550-c.1800' in Social History of Medicine, 25, 1, 2011, p. 20.

⁹ V. Berridge, Opium and the People, (London: Free Association Books 1999); M. Booth, Opium: A History, (London: Simon and Schuster, 1996), p. 24.

¹⁰ G. Risse, Hospital life in enlightenment Scotland: care and teaching at the Royal Infirmary of Edinburgh, (Cambridge: Cambridge University Press, 1986); A. Maehle, Pharmacological experimentation with opium in the eighteenth century. In R. Porter & M. Teich (eds), Drugs and Narcotics in History (pp. 52-76). (Cambridge: Cambridge University Press, 1995). Perhaps the best-known historian of medicine in this period in Scotland is Helen Dingwall. Opium medicines, however, failed to capture her attention. For example, there is only one mention of them in A History of Scottish Medicine: Themes and Influences, (Edinburgh: Edinburgh University Press, 2003). That is speculation that occupying forces would have brought it with them to the frontier in Roman times.

¹¹ The phrase was used by Jordan Goodman, see 'Excitantia: or, how enlightenment Europe took to soft drugs' in J. Goodman, A. Sherratt, P. Lovejoy (eds), Consuming Habits: Global and Historical Perspectives on How Cultures Define Drugs, (London: Routledge, 2007). Goodman does not include opium in the list of 'soft' drugs he discusses in that chapter, but seems to imply that it can be considered so on p. 4 of the introduction. Indeed, opium is discussed in a number of the other chapters in the collection, including my own.

¹² See H. Dingwall, Physicians, Surgeons and Apothecaries: Medicine in Seventeenth-century Edinburgh, (Edinburgh: Tuckwell Press, 1995) for a pioneering account of drugs and medicines in Scotland that first used such sources. Historians have pointed out in other early-modern contexts that accounts can be read not simply for facts but also as social, cultural and even autobiographical data. See A. Smyth, "Money, accounting, and life-writing, 1600–1700: Balancing a life." in A. Smyth (ed.) A History of English Autobiography, (Cambridge: Cambridge University Press, 2016).

¹³ This was also the case for medicinal preparations of cannabis, which were often detailed in British medical dictionaries or reference works in the eighteenth-century but which did not actually find

themselves used in British medical practice until the 1840s. See James H. Mills, Cannabis Britannica: Empire, trade and prohibition, c. 1800 to c. 1924, (Oxford: Oxford University Press, 2003), pp. 25-33.

¹⁴ Hopkins, Paul. "Campbell, John [called lain Glas], first earl of Breadalbane and Holland (1634–1717), magnate and politician." Oxford Dictionary of National Biography. 23 Sep. 2004; Accessed 19 Nov. 2019. https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-4512.

- ¹⁵ Nam, Jong. (2014), 'Medieval European Medicine and Asian Spices', in Ŭi sahak, 23, p. 327 (accessed 13/01/2020).
- ¹⁶ The origins and uses of Laudanum are discussed in Berridge, pp. 22-28.
- ¹⁷ See https://www.genome.jp/db/pcidb/kna_species/5182, accessed 21/11/2019). The PCIDB (PhytoChemical Interactions Data Base) is hosted by GenomeNet, a Japanese network of database and computational services for genome research and related research areas in biomedical sciences operated by the Kyoto University Bioinformatics Center. One study has argued that intoxication can occur from consumption of Papaver rhoeas, Günaydın, Y. K., Dündar, Z. D., Çekmen, B., Akıllı, N. B., Köylü, R., & Cander, B. (2015). Intoxication due to Papaver rhoeas (Corn Poppy): Five Case Reports. Case reports in medicine, 2015, 321360. doi:10.1155/2015/321360.
- ¹⁸ It was not until 1804 that morphine was the first 'opiate', or active alkaloid, to be extracted from organic opium.
- ¹⁹ See John Campbell of Glenorchy, 1st Earl of Breadalbane & Holland on https://www.geni.com/people/John-Campbell-of-Glenorchy-1st-Earl-of-Breadalbane-Holland/5202341201150126692, accessed 19/11/2019. His namesake was born in November 1662.
 ²⁰ G.E. Cokayne; with Vicary Gibbs, H.A. Doubleday, Geoffrey H. White, Duncan Warrand and Lord Howard de Walden (eds), The Complete Peerage of England, Scotland, Ireland, Great Britain and the United Kingdom, (Gloucester: Alan Sutton Publishing, 2000), volume II, p. 292.
- ²¹ An infant suspension on sale in the UK for over fifty years that contains paracetamol, which can be used to treat 'pain and fever' in children from 2 month to six years old. See https://www.calpol.co.uk/our-products/calpol-infant-suspension
- ²² NAS GD220-6-1903 Montrose family.
- ²³ See NAS GD112/39/42/24 Duncan Campbell, Edinburgh, to the laird of Glenurquhay, younger, his uncle June 1631.
- ²⁴ Account taken from NAS GD112-15-117 Accompt [account] of Mr Colin Campbell to John Baillie.
- ²⁵ NAS GD112-15-153 Campbell family Factor's Accounts.
- ²⁶ A rational account of the natural weaknesses of women: and of the secret distempers peculiarly incident to them. Plainly discovering their nature, true cause, and best method of cure, ... By a physician (London 1716), pp. 65-66.
- ²⁷ A useful summary of the ways in which historians have approached these terms in this period can be found in D. Faber, 'Hysteria in the Eighteenth Century' in H. Whitaker, C. Smith, and S. Finger (eds), Brain, Mind and Medicine: Essays in Eighteenth-Century Neuroscience, (Springer, Boston, MA 2007); see G. Risse, 'Hysteria at the Edinburgh infirmary: The construction and treatment of a disease, 1770–1800' in Medical History, 3, (1988), pp. 1–22.
- ²⁸ See M. Grieve, A Modern Herbal, The Medicinal, Culinary, Cosmetic and Economic Properties, Cultivation and Folklore of Herbs, Grasses, Fungi, Shrubs and Trees With all Their Modern Scientific Uses, (Jonathan Cape: London, 1931).
- ²⁹ A rational account, pp. 28-9.
- ³⁰ For a detailed analysis of these sources and their use by historians see E. Leong, Recipes and Everyday Knowledge: Medicine, Science, and the Household in Early Modern England, (Chicago: University of Chicago Press, 2018)
- ³¹ Talbott, Siobhan. "Clerk, John (1611–1674), merchant and landowner." Oxford Dictionary of National Biography. 17 Sep. 2015; Accessed 21 Nov. 2019.
- https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-107331.

https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-22320.

- ³⁶ MURRAY, Alexander (c.1680-1750), of Broughton, Wigtown and Cally, Kirkcudbright from http://www.historyofparliamentonline.org/volume/1715-1754
- ³⁷ A peck was a measure used most often for flour, and was equivalent to about nine litres. From Encyclopaedia Britannica, https://www.britannica.com/science/peck. 'Corn poppy' was another name for Papaver rhoeas or red field poppies.
- ³⁸ NAS GD112-15-510 Account of some small debts paid for the Earl of Breadalbane.
- ³⁹ NAS GD112-74-360 Household and personal bills endorsed by Breadalbane, pp. 28-33.
- ⁴⁰ NAS GD248-179-1 Ogilvy family: Grant Correspondence, pp. 141-2.
- ⁴¹ G. E. C., The Complete Baronetage, volume II (Exeter, 1902) p. 310; https://www.geni.com/people/Sir-John-Moncreiff-of-Tippermalloch-5th-Baronet/600000017849111972 accessed 25.2.18.
- ⁴² Tippermalluch's receipts. Being a collection of many useful and easy remedies for most distempers. Written by that worthy and ingenious gentleman John Moncrief of Tippermalloch: and now first publish'd for the use of all, but especially the poor, (Edinburgh 1712), p. 128; p. 133; p. 133.
- ⁴³ 'Frenzie' was certainly not epilepsy which Moncrieff deals with elsewhere in the volume.
- ⁴⁴ Tippermalluch's receipts, p. 17. Opium is italicised in the original, but it is not clear why this is the case.
- ⁴⁵ Ibid., p. 134.
- ⁴⁶ The Poor Man's Physician. The Receipts of the Famous John Moncrieff of Tippermalloch Being a Choice Collection of Simple and Easy Remedies for Most Distempers, Very useful for all Persons, especially those of a poorer Condition (Edinburgh 1716), p. 70.
- ⁴⁷ Ibid., pp. 67-68.
- ⁴⁸ Ibid., p. 154.
- ⁴⁹ Ibid., p. 58.
- ⁵⁰ Ibid., p. 144.
- ⁵¹ Ibid., unnumbered preface.
- ⁵² See https://www.geni.com/people/James-Campbell/6000000003429199573, accessed 21/11/2019.
- ⁵³ Account taken from NAS GD170/1673 Letter from James Campbell to Alexander Campbell of Barcaldine, advocate.
- ⁵⁴ Wallis (2011).
- ⁵⁵ D. Courtwright, Forces of Habit: Drugs and the making of the modern world, (Cambridge: Harvard University Press, 2001), p. 69.
- ⁵⁶ J. Goodman, 'Excitantia: Or, how Enlightenment Europe took to soft drugs' in J. Goodman, A. Sherratt, P. Lovejoy (eds), Consuming Habits: Global and Historical Perspectives on How Cultures Define Drugs, (London: Routledge, 2007), pp. 130-2.
- ⁵⁷ Taken from the title of Jordan Goodman's essay.
- ⁵⁸ There seems to be no serious study of inhalation as a medical technique in this period. This enables authors such as Iain Gately to claim that 'No one smoked anything in Europe [before the introduction of tobacco]. They burned things to produce sweet smells, to sniff, but not to inhale' (p. 23). There is some suggestion that he is wrong, or in fact is drawing lines that are too fine. Sniffing is one form inhaling of course, and there is some discussion of whether this was a technique used in

³² NAS GD18/2125 Papers of Clerk family of Penicuik, Midlothian; Medical recipes and prescriptions, 1647-1859. It is not clear how the archivists arrived at these dates.

³³ 'Smallpox' in K. Kiple, The Cambridge Historical Dictionary of Disease, (Cambridge: Cambridge University Press, 2003). Accessed 8.6.2018.

³⁴ Pitcairne's papers can be found at Edinburgh University Library.

³⁵ Guerrini, Anita. "Pitcairne, Archibald (1652–1713), physician." Oxford Dictionary of National Biography. 23 Sep. 2004; Accessed 21 Nov. 2019.

European medicine in the medieval and modern period, particularly in regards to anaesthenia. See Plinio Prioreschi, Medieval anesthesia – the spongia somnifera, Medical Hypotheses,61, 2, 2003, pp. 213-219, https://doi.org/10.1016/S0306-9877(03)00113-0. Accessed 27/11/2019.

⁵⁹ P. Withington, Introduction: Cultures of Intoxication, Past & Present, Volume 222, Issue suppl 9, 2014, pp. 9-33, https://doi.org/10.1093/pastj/gtt027

⁶⁰ Of course, the conclusion is a hostage to fortune as there may yet be evidence out there of pleasure-seeking use of opium products in early modern Scotland. Noone would be more glad than the author if this article stimulates researchers to find it. As Withington has pointed out, in other contexts the pleasure seekers and the pain relievers were not mutually exclusive in the eighteenth-century, and both featured in the market for intoxicating or psycho-active medicines.