

FEATURE

CHRISTMAS 2012: YESTERDAY'S WORLD

Toilet hygiene in the classical era

Philippe Charlier and colleagues describe how the Romans wiped their bottoms and speculate about the resulting health problems

Philippe Charlier *assistant professor in forensic medicine and anthropologist*^{1,2}, Luc Brun *pathologist*³, Clarisse Prêtre *researcher*⁴, Isabelle Huynh-Charlier *radiologist*⁵

¹Department of Forensic Medicine and Pathology, University Hospital, 104 R Poincaré Boulevard, F-92380 Garches, France ; ²Laboratory of Medical Ethics, Faculty of Medicine, Paris, France; ³Department of Pathology, University Hospital, Parakou, Benin; ⁴HALMA-IPEL, Lille 3 University, Villeneuve d'Ascq, France; ⁵Department of Radiology, University Hospital Pitié-Salpêtrière, Paris, France

The first mention of toilet paper in the Western world comes from the 16th century, with a short description by the French novelist (and physician) François Rabelais arguing its ineffectiveness.¹ China, however, had toilet paper in the 2nd century BC,² and the Japanese used *chuugi* (20-25 cm wooden sticks) during the Nara period (8th century AD) for both external and internal cleaning of the anal canal. Other cultures do not use toilet paper, partly because paper is often not easily available. Anal cleaning can be carried out in various ways according to local customs and climate, including with water (using a bidet, for example), leaves, grass, stones, corn cobs, animal furs, sticks, snow, seashells, and, lastly, hands.

During the Greco-Roman period, a sponge fixed to a stick (*tersorium*) was used to clean the buttocks after defecation; the sponge was then replaced in a bucket filled with salt water or vinegar water.³ Another technique was to use oval or circular fragments of ceramic known as "pessoi" (meaning pebbles),⁴ a term also used to denote an ancient board game. Aristophanes referred to the use of pessoi for sanitary purposes in *Peace* (5th century BC):

"Arms dealer (displaying a cuirass): And what, alack, shall I do with this rounded cuirass, a beautiful fit, worth ten minas?

Trygaeus: Well, that one will not make a loss for you, anyway. Give me that at cost price. It will be very convenient to crap in . . .

Arms dealer: Stop this impudent mockery of my goods!

Trygaeus (placing the cuirass on the ground like a chamber pot, and squatting on it): Like this, if you put three stones beside it. Is it not clever?"⁵

This conversation is clearly scatological (as often in Aristophanes), and the lines before and after this quote refer to wiping the buttocks. It therefore seems likely that Trygaeus is referring to the Greek proverb: "Three stones are enough to wipe one's arse," although some have suggested the stones were for balancing the cuirass.

Many pessoi have been found within the faecal filling of Greek and Roman latrines all around the Mediterranean world (fig 1).⁶ Pessoi found during the American excavation on the Athens' agora, for example, are described as 3-10.5 cm in diameter and 0.6-2.2 cm thick and having been re-cut from old broken ceramics to give smooth angles that would minimise anal trauma.⁴ Use of a pessos can still be seen on a Greek cylix (wine cup) conserved in the Museum of Fine Arts in Boston, US. The cup, dating from 6th century BC, was found in Orvieto, Italy, and shows a man, semi-squatting with his clothing raised. The man is maintaining his balance with a cane in his right hand and is clearly wiping his buttocks using a pessos with his left hand.

Some scholars suggest that ostraka, small pieces of broken ceramic inscribed with names that the Greeks used to vote to ostracise their enemies, could also have been used as pessoi, literally putting faecal matter on the name of hated individuals. (Examples of ostraka with the names of Socrates, Themistocles, and Pericles have been found in Athens and Piraeus).

The two pessoi in figure 1 belong to a private collection. Their precise archaeological origin (discovered in the filling of latrines close to deposits of excrement) and their morphology (rounded form with the edges recut) clearly indicate their use for anal cleaning. Solidified and partially mineralised excrement can still be seen on the non-cleaned and lateral surfaces, which has been confirmed by microscopy (fig 2).

The abrasive characteristics of ceramic suggest that long term use of pessoi could have resulted in local irritation, skin or mucosal damage, or complications of external haemorrhoids. Maybe this crude and satiric description by Horace in his 8th epode (1st century BC)—“an ass at the centre of dry and old buttocks mimicking that of a defecating cow”—refers to complications arising from such anal irritation.⁸

Competing interests: All authors have completed the ICMJE unified declaration form at www.icmje.org/coi_disclosure.pdf (available on request from the corresponding author) and declare no support from any organisation for the submitted work; no financial relationships with any organisation that might have an interest in the submitted work in the previous three years; and no other relationships or activities that could appear to have influenced the submitted work.

Contributors: PC initially conceived, headed the research, and wrote the majority of the manuscript with critical input from LB, CP, and IHC. All authors had full access to all of the data and are guarantors.

Provenance and peer review: Not commissioned; externally peer reviewed.

- 1 Rabelais F. *Gargantua et Pantagruel*, 1, 13.
- 2 Needham J. Science and civilization in China. Vol 5. Chemistry and chemical technology. Part 1: paper and printing. Caves Books, 1986:122.
- 3 Seneca. *Letters to Lucilius*, 70, 20.
- 4 Papadopoulos JK. A contextual approach to pessoi (gaming pieces, counters or convenient wipes?). *Hesperia* 2002;71:423-7.
- 5 Aristophanes. *Peace* [Translation by A Sommerstein]. In: The birds and other plays. Penguin Classics, 1998.
- 6 Charlier P. Le péril fécal dans l'Antiquité : autopsie d'une latrine romaine de Délos. *Feuilles de Biologie* 2011;52(299):61-5.
- 7 Colozier E. Quelques monuments inédits d'Utique. *Mélanges d'Archéologie et d'Histoire* 1952;64(64):67-86.
- 8 Janicke DM, Pundt MR. Anorectal disorders. *Emerg Med Clin North Am* 1996;14(4):757-88.

Accepted: 12 November 2012

Cite this as: *BMJ* 2012;345:e8287

© BMJ Publishing Group Ltd 2012

Figures



Fig 1 Examples of terracotta pessoi (probably from amphora) found in Roman latrines dating from the 2nd century AD. The one on the left comes from Utica (Sicily), has a diameter of 4.7 cm and a thickness of 1.7 cm, and has been re-cut as an octagon.⁷ The pessos on the right was found in Gortyn (Crete) and has a diameter of 6 cm and a thickness of 1.3 cm

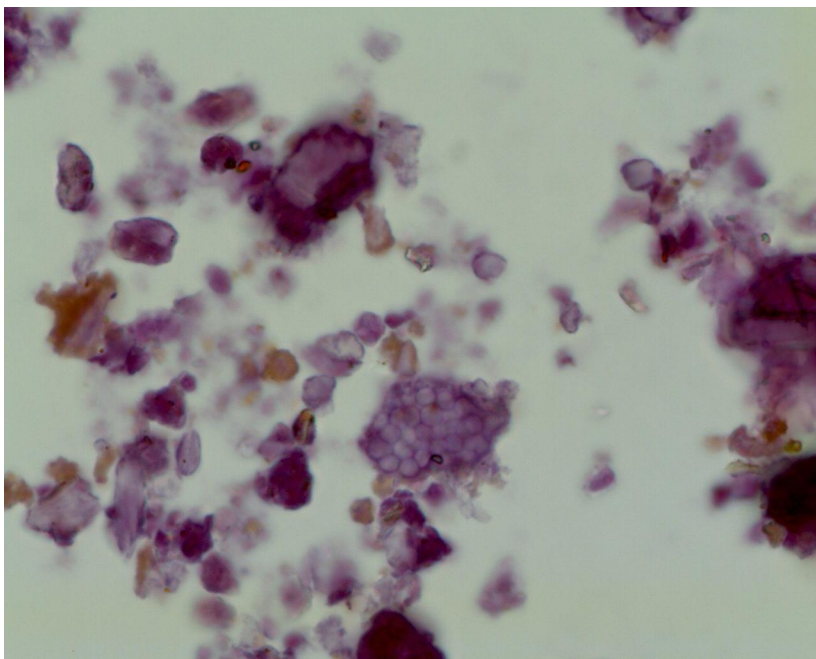


Fig 2 Microscopic view of the excrement solidified and partially mineralised on the non-cleaned face of the pessos from Gortyn (HES coloration, $\times 1000$ magnification)