

# Treatment of migraine attacks before the twentieth century

## Tratamento da crise migranosa antes do século XX

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### ABSTRACT

Migraine accompanies humans throughout their existence and, for the relieve of their pain, various forms of treatment were used. From the Neolithic to the Modern Age, Mesopotamian, Egyptian, Chinese, Greek, among other people, have suffered intense attacks of chronic headache. Many different treatments have been used from skull drilling and bloodletting to the use of herbs and plants. People who lived before the twentieth century had no knowledge of any drug treatment.

**Keywords:** Migraine; Treatment; Ancient times

### RESUMO

A migrânea acompanha o ser humano ao longo de sua existência e, para o alívio de suas dores, diversas formas de tratamento foram utilizadas. Do período neolítico à idade moderna, mesopotâmicos, egípcios, chineses, gregos, entre outros, padeceram de crises intensas de cefaleia. Inúmeros tratamentos diferentes foram utilizados, desde perfurações cranianas, sangrias e o uso de ervas e plantas. Os povos que viveram antes do século XX desconheciam qualquer tratamento farmacológico.

**Palavras-chave:** Migrânea; Tratamento; Antiguidade

### INTRODUCTION

Pain, especially headache, is one of the great scourges of humanity. In several regions of the world, there has always been engagement in the search for its cure. Its dimensions varies according to each society and the historical moment in which it finds itself in.<sup>1</sup>

Migraine is manifested clinically by recurrent episodes of headache and other associated manifestations such as nausea, vomiting, photophobia and phonophobia. However, this type of headache is the most frequent complaint and, when very intense, it may prevent the patient from doing his/her routine activities.<sup>2</sup>

Unfortunately, up to the early years of the nineteenth century, there is no record indicating any pharmacological treatment for headache, as the first chemical substance with analgesics to be isolated in the laboratory was salicin, from willow bark (*Salix Alba*) by the Italian chemists Brugnatelli and Fontana, in 1826.<sup>3</sup> As time went on, this drug would lead to acetylsalicylic acid, commercialized only in the twentieth century, starting on October 10th, 1903.<sup>4</sup>

Throughout ancient times to the years preceding the twentieth century, man has used different treatments to the relieve of headache.<sup>5</sup>

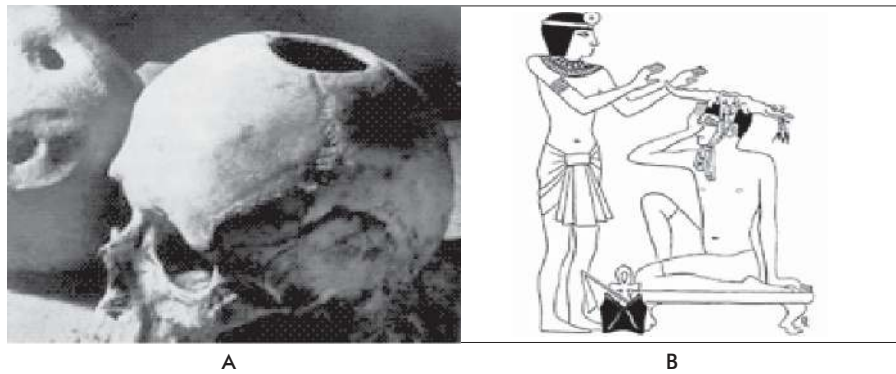


Fig. 1 - Headache treatment

## BEFORE THE CHRISTIAN ERA

Approximately 7000 years BC, according to archaeological finds, Neolithic civilizations had already been suffering from intense attacks of headache. This pain was associated with a supernatural explanation, such as a divine punishment or due to possession by evil spirits inside the skull, which is why the patient would be isolated for purification or there would be holes opened "in vivo" in the head to extract the evil spirit.<sup>6-9</sup>

Around 1700 BC, in Mesopotamia, the treatments for headache were described in the Code of Hammurabi, and it was also common using skull perforations.<sup>2,7</sup>

It was also believed among the ancient Greeks that the headache was the result of a possession. The Greek god Zeus, according to the mythology of this people, suffered from a violent headache that forced Hephaestus to open his skull with a golden ax so that Athena, his daughter, were born.<sup>6,9</sup>

In ancient Egypt, through mythological stories and especially the Ebers Papyrus (1536-1534 BC) and the Chester Beatty V (1300 BC), descriptions of intense and incapacitating headache affecting a half of the head and that would alleviate with rest are noticed.<sup>10</sup> It is perceived that these characteristics are consistent with the diagnosis of migraine.<sup>1</sup>

Treatment of migraine attacks used at that time was limited to the Pharaohs and was associated with the rituals of magic, needing enchantment and prayers from the gods.<sup>10</sup>

In the paragraphs of the Egyptian papyri more than 800 prescriptions are described with various forms of palliative treatment for migraine, such as infusion of leaves of myrtle (*Myrtus communis*), anointing the head with oil in which catfish was fried, cooling the painful head, use of relaxation, massage and hot or cold pads or even drinking a mixture of crocodile fat with semen and feces

dissolved in urine three times a day.<sup>10</sup> Another form of treatment consisted of placing the patient sitting up and tying securely on his/her head a clay crocodile with wheat in its mouth, through a strip of white linen with the names of several gods (Figure 1).<sup>8,10,11</sup> With this technique, the reports suggested the improvement of patients, probably due to the compression of enlarged arteries of the scalp.

In 1000 BC, the Chinese came up with the acupuncture, from the Latin *acus* (needle) and *punctum* (sting), which consisted, as nowadays, of stimulating specific body areas with needles or magnet, to relieve the headaches. It is attributed to Chinese surgeon Hua T'o, as the first to use acupuncture needles for the treatment of migraine.

In Greece, Hippocrates (460-377 BC) always involved himself with the treatment of pain, as evidenced by the famous sentence attributed to him, "*Sedare dolorem opus divinum est*" (easing the pain is a divine work). He treated the migraine with powder made from the bark and leaves of willow (*Salix alba*), a plant rich in salicin (a precursor substance of salicylic acid).<sup>2,12</sup> Hippocrates was also the first to use bloodletting as treatment of crises of migraine.<sup>9</sup>

## AFTER THE CHRISTIAN ERA

Around the year 80 AD, Arateus, born in Cappadocia (modern Asiatic Turkey) described migraine for the first time.<sup>7,8,13,14</sup> At that time, the treatments, even though very ineffective, were very popular, such as the habit of tying a whip around the neck.<sup>12</sup>

In the Roman Empire, during the first years of the Christian era, opium was the analgesic used for headaches, a thick juice that was extracted from the opium poppy (plant of the *Papaver* genus). Later on, its major alkaloids would become known: morphine, codeine and papaverine.<sup>9</sup>

In the sixth century, the eminent Greek physician Alexander of Tralles (525-605 BC) attributed the cause of headaches to an overflowing of bilious moods which he treated with emetics (substances for inducing vomiting), purgatives, laxatives, besides prohibiting greasy foods.<sup>7</sup>

Other methods of pain relief were used in the ninth and tenth centuries, e.g., Al-Zahrawi or Abu'l Oasim, born in Spain in 936 AD who treated pain by pressing a hot iron on the sore spot, or putting garlic on temples after skin incision.<sup>13,15</sup> The British wore pieces of swallow's nest on the forehead or drank elderberry juice (plant genus *Sambucus*) or ate goat manure.<sup>12</sup>

In the Middle Ages, from the eleventh to the fifteenth century, some Europeans, to relieve their pain, applied opium on the head with a vinegar solution that would open the pores for absorption of the drug. This treatment was used by the German nun Hildegard von Bingen (1098-1179), who suffered from migraine with aura.<sup>12</sup>

In South America, from the thirteenth to sixteenth century, there were the Incan (now Peru) and Aztec (now Mexico) civilizations, people of a pre-Columbian Andean culture that used religion, magic and plants, mainly coca leaves (*Erythroxylon coca*) and mandrake (*Mandragora officinarum*) to control the pain.<sup>2</sup>

In the sixteenth century, during the year 1560, the French diplomat Jean Nicot (1530-1600) was ambassador to Portugal and from there he brought to France the first seedlings of tobacco (*Nicotiana tabacum*). He enjoyed snuffing ground tobacco, called snuff, to relieve his headaches. In 1560, he indicated its use to the French Queen Catherine de Medici (1519-1589), who suffered from terrible headaches.<sup>16</sup>

During the eighteenth century and well into the Modern Age, patients with migraine, epilepsy or other neurological disorders were often subjected to interventions to remove the "stone of madness".<sup>17-18</sup>

In that same century, the remarkable neurologist Samuel Auguste Tissot (1728-1797) who lived in Switzerland and used the knowledge from Hippocrates, also recommended bloodletting for the treatment of migraine attacks. This procedure often caused the death of the patient.<sup>9</sup>

## CONCLUSIONS

In the past, migraine was treated only during the attacks with the knowledge and culture of each civilization. However, the use of medicinal herbs has contributed to the emergence of the first analgesic drugs such as acetylsalicylic acid and dipyrone.

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## COMENTÁRIO

O artigo de Silva-Neto e Almeida – Treatment of migraine attacks before the twentieth century – nos mostra de forma lúcida que, embora a cefalialgia tenha iniciado no século XX, o tratamento da migrânea e de outras cefaleias foi registrado por médicos de diversas civilizações que precederam aquelas do século XX.

Graças a estes registros, podemos hoje avaliar tanto a evolução do conhecimento médico quanto a compreensão dos mecanismos da migrânea e que motivaram algumas das técnicas de seu tratamento. Não apenas isto, mas conforme apontado por Silva-Neto e Almeida, alguns tratamentos atuais (ácido acetil-salicílico e dipirona) foram identificados a partir de observações empíricas daquela época. Mais informações acerca da história da migrânea e outras cefaléias pode ser lida nas revisões de Isler, Isler & Clifford Rose e de Isler & Koehler.

Além de nos ilustrar na história do tratamento da migrânea, a leitura do artigo de Silva-Neto e de Almeida tem o dom de nos remeter a outra reflexão: o quanto negligenciamos o nosso passado. Talvez seja hora de resgatarmos a história da compreensão e do tratamento da migrânea e de outras cefaleias no tempo do Brasil-Império, o que talvez nos permita entender o que significa uma dor de cabeça e o seu tratamento no imaginário de nossos pacientes.

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