

Analogies in medicine: part V

Analogias em medicina: parte V

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ABSTRACT

This is a compilation of terms which, by analogy, have been used as jargons in various medical specialties. In this essay, we describe the origin of the terms “inverted champagne bottle” and “beaten copper saucepan” skull. The first was originated by analogy of the shape of the bottle of sparkling wine known as Champagne with certain disorders of the lower limbs. The second results from the similarity of the skull with handmade copper pots in diseases that cause premature closure of the cranial sutures. Interesting historical and cultural aspects of these analogies are presented.

Key words: Medicine; Terminology; Education, Medical.

RESUMO

Trata-se de compilação de verbetes que, por analogia, passaram a ser utilizados como termos das diversas especialidades médicas. Neste ensaio, descreve-se a origem dos conceitos de garrafa de champanhe invertida e crânio em tacho de cobre batido. O primeiro foi originado por analogia com a forma da garrafa do vinho espumante conhecido como champanhe, em certos distúrbios dos membros inferiores. O segundo resulta da semelhança do crânio com o tacho de cobre artesanal em doenças que provocam o fechamento precoce das suturas cranianas. Interessantes aspectos históricos e culturais dessas analogias são apresentados.

Palavras-chave: Medicina; Terminologia; Educação Médica.

INTRODUCTION

Several phrases and specific comparative terms are present in the various fields of medicine, keeping pace with the accelerated process of scientific progress. Compiling these terms has been part of our research work in the last 10 years.¹ Whenever possible, we try to provide a mix of medical, historical, and cultural aspects related to each theme, so as to make them more interesting and attractive.

In addition to providing information about medical terminology, analogies in medicine are recognized as important teaching resources, helping the learning and memorization processes².

Two analogies are now presented:

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Inverted champagne bottle

Champagne (from the French champagne) is a sparkling white wine made from fermented grapes in the Champagne region of northeastern France, part of the administrative region of Champagne-Ardenne, whose capital is Epernay. According to historical accounts, it was near Epernay, in the village of Hautvillers, that monks Dom Pérignon and Dom Ruinart attempted to tame certain wines that went through secondary fermentation in the bottles, which caused them to explode. The Champagne region produces mainly sparkling wines (white or rose) from *chardonnay* and *pinot noir* grapes, simply called champagne.

One of the reasons that brought this wine to fame was the fact that almost all the greatest kings of France were crowned in Reims, the most important city in the Champagne region. The coronation often took place in the Notre-Dame de Reims Cathedral, built in 1225. Because champagne was served in these celebrations it became known as the wine of kings.

The wine becomes sparkling due to fermentation and the production of carbon dioxide.

A bottle, as we know, is a cylindrical glass vessel with a narrow neck, intended for holding liquids. The champagne bottle, by tradition, has a peculiar shape with a narrow neck, no shoulders, and soft curves, made of thick glass to withstand internal pressure. This shape became widely known as a “trademark” of the famous sparkling wine.

Some diseases, manifested mainly in changes in the lower limbs, lead to deformities that have been compared to the shape of a champagne bottle. One such condition is Charcot-Marie-Tooth disease or peroneal muscular atrophy. It is the most common peripheral neuropathy of autosomal dominant inheritance, affecting approximately 1:2,500 individuals. Symptoms onset usually happens in the second or third decade of life, that is, in teenagers and young adults. It is a predominantly motor disorder, characterized by progressive atrophy of the distal muscles in the lower limbs. It also causes atrophy of the foot (high-arched feet or pes cavus) and of the peroneal muscles in the leg, which becomes thinner and out of proportion to the relatively unaffected thigh³. Upon ectoscopy, the general aspect resembles the shape of an inverted champagne bottle (Figure 1). Other conditions leading to this clinical picture include cases of chronic leg ulcers and lipodermatosclerosis, which

result from vascular disorders of the lower limbs⁴. The swollen tissues may be invaded by fibroblasts, causing collagenization and hardening of the lower third of the leg and edema above the area of constriction.



Figure 1 - Inverted Champagne bottle
Source: Rook. Textbook of Dermatology.

Beaten copper pot

In certain diseases, such as some congenital anomalies, a premature closure of the cranial sutures (synostosis) and continued brain growth cause compression of the skull's inner surface.

Upon radiological examination (common radiography), the skull shows finger-like gyral impressions/convolution markings on the inner table of the skull, comparable to those found in hand-beaten copper, when a hammer is used against the copper surface to beat it into shape. This beaten copper or metal aspect can be seen in hand-beaten copper pot bottoms, made not only in Brazil but in other countries too, thus giving rise to the expressions *copper-beaten skull* and *beaten-metal appearance*.

The pathological conditions that increase intracranial pressure are the primary cause of this type of radiological finding, and include craniosynostosis, obstructive hydrocephalus and intracranial masses. The *beaten copper* image is very evident in Crouzon Syndrome⁵ (craniofacial dysostosis) (Figure 2), Apert Syndrome (acrocephalosyndactyly) and in the rare Proteus Syndrome.



Figure 2 - Crouzon Syndrome (craniofacial dysostosis).

REFERENCES

1. Andrade Filho JS, Pena GP. Analogies in medicine. *Int J Surg Pathol*. 2001 Oct; 9(4):345-6.
2. Pena GP, Andrade Filho JS. Analogies in medicine: valuable for learning, reasoning, remembering and naming. *Adv in Health Sci Educ Theory Pract*. 2010 Oct; 15(4):609-19.
3. Office of Communications and Public Liaison. National Institute of Neurological Disorders and Stroke. National Institutes of Health. Bethesda, MD 20892, 2011.
4. Rook W, Ebling Textbook of Dermatology. 6th ed. New York: Blackwell Science; 1998. p.2256
5. Andrade Filho JS, Pena GP, Aymoré IL, Brasileiro Filho G. Editor. *Bogliolo Patologia*. 8^a ed. Rio de Janeiro: Guanabara Koogan; 2011. p.1027.