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Revisiting Coudability Hairs in Alopecia Areata: The Story behind the Name

Rodrigo Pirmez

Dermatology Department, Instituto de Dermatologia Professor Rubem David Azuly, Santa Casa de Misericórdia do Rio de Janeiro, Rio de Janeiro, Brazil

To the Editor,

When examining patients with alopecia areata (AA), I am often questioned by my students about the meaning of the term coudability hairs. Their curiosity, along with the interesting historical events involved in this matter, motivated me to revisit this subject. The origin of the name goes back to 1958 (or even 1835, as we will see), and that is a story worth sharing.

In 2009, Inui et al. [1] reported that, in patients with AA, they often observed through trichoscopy normal-looking, long hairs that tapered at the proximal end (fig. 1). This finding (which they

named coudability hairs) was significantly associated with other trichoscopic features, such as black dots and exclamation mark hairs, and was also considered a trichoscopic marker of disease activity [1].

The chosen name was no coincidence. In 1984, Shuster [2] had previously described coudability not as a trichoscopic, but as a clinical sign. By manually pushing these tapered hairs inwards towards the scalp, one could easily bend them, producing an obvious kink in the shaft, where it was poorly formed (fig. 2). Since such hairs had the *ability* to bend, assuming an appearance that reminded the author of a *coudé* catheter, Shuster concluded that *coudability* would be an appropriate term for this sign of the hairs of AA.

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Fig. 1. Trichoscopic appearance of a coudability hair: long hair with proximal hair shaft tapering. The arrow points towards the thinned proximal end of the shaft. Numerous exclamation mark hairs can also be observed in this picture.

Fig. 2. Illustration of the coudability sign: when pushed inwards toward the scalp, the proximal hair shaft, which is thinner, tends to bend.

However, it was only years later that the real story behind the name was exposed: in 2011, Shuster [3] revealed that the name derived from a student joke. In 1958, *The Leech*, a magazine ran by students from the Welsh National School of Medicine in Cardiff, UK, published a series of fake medical biographies. One was on Emile Coudé, supposedly a French surgeon who invented the *coudé* catheter in 1835. The biography was so convincing that it was even referenced as real in the 11th edition of *A Short Practice of Surgery*, an undergraduate textbook.

By now, I should mention that, in French, 'coudé (the adjective) means bent and coude (the noun) means 'elbow'; making it clearly the reason why the catheter received this name (fig. 3). In fact, it was Louis Mercier the responsible for the catheter invention in 1836. When the authors of the textbook became aware of the hoax, they wrote a letter to *The Lancet* exposing the entire situation [4]. Further confusion followed when a Frenchman named Hercule Coudé responded, claiming that the catheter was indeed invented by his great uncle Emile Coudé. Another (possibly humorous) response claimed that the inventor was 'not Coudé, but his half-brother Bicoudé' (which is, in fact, another catheter) [5, 6]. The speculations had an end when the author of the biography admitted that the article was a joke among the students at Cardiff [7].

Reminded of this historical confusion by his new sign of AA, Shuster [3] decided to give a tribute to the Cardiff students and named it coudability.

Nevertheless, going back to the hair itself, what is the cause for this proximal tapering? One possible explanation is that the rapid transition from anagen to catagen would result in hair shaft narrowing, reflecting a common pathomechanism between coudability and exclamation mark hairs. Alternatively, coudability hairs could reflect a less severe injury to the hair follicle, which would continue into an anagen, albeit a dystrophic anagen, resulting in proximal hair shaft tapering [1].

One often overlooked aspect is that, in his papers, Shuster [2, 3] also considered those hairs that managed to remain in anagen.

After growing, such hairs will show a thinner section of shaft not in the proximal part, but several millimeters away from the scalp. These thinner sections, also known as Pohl-Pinkus constrictions, represent the point where the disease had struck (in case of recurrent episodes, several constrictions can be seen) [2, 3]. When pushed inward, such hairs will bend at the constriction points showing the coudability sign. Coincidentally or not, their trichoscopic correlate has been mentioned in the literature as 'elbow hairs' (free translation from the Portuguese 'cabelos em cotovelo') (fig. 4) [8, 9].

Fig. 3. a A coudé catheter, which is bent like an elbow at one of the extremities. In b, a straight catheter is shown for comparison (original picture from 180 Medical, printed with permission).

Fig. 4. Elbow hairs (cabelos em cotovelo): hairs that bend at points where the shaft is thinner (Pohl-Pinkus constriction) due to alopecia areata activity, as presented in this image which shows the scalp of an African-American woman (a) and the eyebrows of a young Caucasian girl (b).

In conclusion, even though coudability hairs are not pathognomonic of AA (they have been also described in chemotherapy-induced alopecia) [10], they remain a useful clinical feature and a marker of disease activity. With this brief review, I hope to have shed some light to my students' questionings and also to bring some joy to those who appreciate the history and the delightful curiosities of the challenging field of hair diseases.

Statement of Ethics

This paper does not report any patient information. There was no breach to patients' privacy or confidentiality.

Disclosure Statement

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