

Plica neuropathica – a short history and description of a particular case

Plica neuropathica – historia problemu i opis przypadku

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W ostatnich latach zostało opublikowanych tylko kilka prac opisujących przypadki plica neuropathica (polonica). W tych przypadkach włosy głowy w ograniczonym obszarze zbijają się w nieregularnie skręcone, nieodwracalnie splątane pęki. Psychologiczne zaburzenia są czynnikiem ryzyka powstawania kołtuna. W artykule przedstawiamy przegląd piśmiennictwa i opis przypadku plica neuropathica u dorosłej kobiety z rozpoznaną schizofrenią paranoidalną.

Słowa kluczowe: *plica neuropathica*, *plica polonica*, schizofrenia paranoidalna

In recent years only a few incidents of plica neuropathica (polonica) were described. In this condition the hairs of scalp in a localized area is compacted into irregularly twisted, irreversibly entangled plaits. Psychological disturbance is a risk factor for plica formation. We present a review of literature and description of particular case of plica neuropathica in an adult female with paranoid schizophrenia.

Key words: *plica neuropathica*, *plica polonica*, *paranoid schizophrenia*

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Folk names

Gloger claims that the Polish name for *plica neuropathica* (*polonica*) – kołtun is derived from the archaic verb “kołtać się”, used to describe the swaying movement of sticky, twisted hair [1]. Such mass of tangled hair could either reach the size of a large hat, or dangle from head to waist in one or several locks. Across the centuries, other terms had been in use, such as “ból” or “bólaczka” [eng. pain], which came from the belief that *plica* manifests itself by causing severe headaches, as if patient’s skull has been pierced by a nail; “gwoździec”, another name, comes directly from this connotation.

Since *plica* had also been thought to be the effect of a spell cast by a witch, it was sometimes called “wieszczycze”. Such terms as Latin “Tricae incuborum”, Dutch “marelok” or Swedish “marfotra” also suggest that the occurrences of *plica* were caused by a supernatural influence.

In Moravia, *plica* was labeled as “skrzot” or “skrzytek” – a word representing a vexing spirit that entangled hair [2]. Gąsiorowski, in his efforts to track *plica* occurrences, mentions Hamburg, Greiswald, Alsace (where he reveals the German term for *plica* – “Marenflechte”), Wichtelzopf – from the demon Wichtel, Wixelzopf, as well as Paris, Britain, Belgium, Hungary, Red Ruthenia and even Napoli, where *plica* was referred to as “La treccia della fata”. The above-mentioned instances suggest that people of those areas believed in supernatural origins of *plica*.

Prevalence

Gąsiorowski presents a 16th century letter from the former rector of Zamojski Academy to the professors of the medical faculty of Padua University, as a source of *plica* occurrences in Poland. In the very letter, the former rector Wawrzyniec Starnigieliusz described

the incidents and claimed that the phenomenon was widespread across the whole Republic of Poland [3]. Because of the missive, as Łabędź reports, physicians of Padua held a series of meetings which produced several theses on the subject and a lively discussion that went beyond Padua and Zamość and spread across other European university towns. Zamojski Academy ignited interest in plica's origin, cause and resulting health issues which eventually spawned (up until 19th century) approximately 900 publications on the matter [4].

In the 18th century, Jędrzej Kitowicz in his "Opis obyczajów za panowania Augusta III" wrote: 'plica is to be found aplenty in Poland and Lithuanina. Yet, comparing to other voivodeships it seems that in the Duchy of Masovia and especially among peasants, plica is so common that out of three peasants' heads, two have to have plica' [5].

It is hard to tell whether the idea of classifying Polish plait as an illness was born independently on the areas of former Poland, or, as Gloger quotes Rosenbaum's research, the phenomenon was known by Germanic peoples for centuries and spread from the west down to the east, not the other way around. In the dawn of modern times the memory of *plica polonica* faded among most European nations. However, it was widespread on the Polish land to such a degree that the phenomenon gained a name directly related to Poland – Polish plait, *plica polonica* or even Weichselzopf, which simply means Vistula braid [6]. On the other hand, one should bear in mind that between 1772 to 1918 Poland did not exist as a country. During this period both the education and hygiene of the Polish community could serve as a proof of how Russia, Prussia and Austria 'cared' about their 'newly acquired' citizens.

Beliefs and treatment

The fact that needs emphasizing is that Polish plait was not just an outcome of an overall disregard for hygiene. Ordinary folk as well as physicians of that time believed that *plica* was not only a representation of a general illness, but also a tangible counterpoise to any hidden disease. That is why physicians recommended growing a Polish plait in order to cure various ailments and at the same time warned about illness reoccurrence if a patient decided to cut the plait. From the 16th to 18th century most doctors in Europe maintained that a rash and thoughtless disposal of *plica polonica* (especially the undeveloped one) may be dangerous. Lafontaine, a physician who stayed in Poland in the 18th century claimed that the entanglement of hair in *plica polonica* case was a manifestation of its solstice and neither cleanliness nor combing will stop the advance of Polish plait. He also stated

that even if the entanglement of hair was somehow prevented, then the very matter of illness would target other, more important organs (brain, lungs, stomach), which would lead to worse maladies such as epileptic seizures, neurological disorders, inflammations, bleedings etc. Just as the removal of an undeveloped plait (before its ultimate solstice) could result in – according to Lafontaine, severe diseases and even death [7].

Such theories came from respectable members of medical community – there was a dominant belief that Polish plait protected people from serious diseases but at the same time it was a direct effect of some severe, mysterious ailment nested inside a human body and manifesting itself by entangling hair. The spread of *plica polonica* was additionally fuelled by opinions and claims that before the plait formed itself, it tormented the sick with a variety of maladies. It broke the patient, caused spasms, seizures, constant headaches that grew stronger when combing hair, coma, insomnia, inflammations (especially eyes), temporary blindness, limb shrinkage, ulceration, deafness and a myriad of other aches and diseases, because it circulated with blood and existed within the organism. A belief was held that hair entanglement was the only remedy for many life-threatening conditions. Therefore, folk were not trying to prevent their hair from entangling – quite the contrary, they helped *plica* develop by whatever means necessary. Hair were not to be combed for weeks, instead, wax from Passover candles was poured onto them, followed by washing with Vinca major, *Lycopodium clavatum* and particularly moss. Such an artificially developed plait was to be worn until new unentangled hair would grow back. This process took at least a year and six Sundays and not a day less. The precaution not to cut it too soon was the main reason why some wore the Polish plait until the end of their days. Interestingly, the plait being an inanimate object was given a sort of life of its own. In a situation when the patient mustered up enough courage to cut the plait, it had to be wrapped in a cloth along with some money and a piece of bread so it would not get mad, then sprinkled with vodka and tied with a new ribbon. After that, the bundle with the tamed plait was put inside a chest, hidden behind a stove, stuffed under a barn's thatched roof or buried near a wayside shrine, a fruitful tree or elderberry tree. Village elders told stories of plaits migrating from one place to another or alighting on bushes or on top of growing crops. A hurt plait would even utter various sounds in discontent [2, 8].

As literary sources prove, the Polish plait was grown by people suffering from eye diseases, venereal diseases and serious instances of rheumatism (especially joint inflammation – "gośćcowe" in Polish; that's why *plica polonica* was also called "gośćciec").

Even if one of the patients decided to get rid of the plait, the diseases he or she suffered would still remain. Moreover, any ailments and aches would escalate along with the progress of the disease and it would be attributed to some sort of ‘plait’s revenge’. Eventually, the patient would try to grow a new plait [9]. Adding the grave dangers of getting rid of *plica* and belief in its powers of protection (from diseases, demons) when worn, we can easily understand why this phenomenon was so very common in both Poland and Lithuania. Such state of affairs was prevalent and seldom the voices of people like William Davidson changed that. Davidson, a personal doctor for John II Casimir Vasa and Marie Louise Gonzaga, cut plaits wherever he went, advising combing and hair hygiene as a remedy. An early 18th century doctor Tobias Cohn shared his opinion [1].

Modern views

Despite Davidson and Cohn, a strong conviction that regarded *plica polonica* as a disease was very popular. Doctor Joseph Frank, who was active in the first quarter of the 19th century, on occasion recommended growing the plait to some of his patients [7]. Frank was a professor of internal medicine and individual therapy clinics in Vilnius and an author of many well-known works in Europe.

In the first half of the 19th century Gaşiorowski, whom we cited above, defended the *plica* as a disease idea when he wrote: ‘enemies of Poland, who only wish to disgrace the Polish nation in front of the other nations, say that the Polish plait in disorder has its roots and assuming that, I would like to ask them if their hares, pigs, horses et cetera are also more decent than the Polish counterparts, as in Poland these animals can be commonly seen with a plait as well’ [3].

Not before the second half of the 19th century had the medical world started to criticise the existence of such a disease as *plica polonica*. Henryk Dobrzycki (a doctor, philanthropist, musicologist, composer, one of the first to propagate climatotherapy and sanatorium treatment in Poland) deserves a special distinction for his 1877 publication on the Polish plait, in which he discredited hitherto prevailing works about *plica* and presented his research on the growth and behaviour of hair that form a plait [10]. One must also mention Józef Dietl, a professor of Jagiellonian University. Thanks to his efforts the Austrian authorities ordered subordinate medics to investigate the issue of *plica polonica* and hand the results to a committee led by Józef Dietl for further research. Approximately one thousand people were examined. After more research, Dietl firmly concluded that lack of hygiene is directly responsible for the creation of plaits and there are

absolutely no complications after cutting it [11]. He also suggested introducing some inconveniences for people with the Polish plait – no entry to public utility buildings and no right to apply for charity services as well as census of people with *plica polonica*. All these actions and circulating rumours about imposing a tax on *plica polonica* ‘owners’ had a positive impact and the number of people with a Polish plait began to decrease at a rapid pace [12].

Last incidents of *plica*

In recent years only a few incidents of *plica polonica* were described. These occurrences, reported by Morewitz, were noted in England and India and resulted from neglecting personal hygiene [13].

The term *plica neuropathica* appeared for the first time in 1884 in Le Page, where a case of a 17-year-old woman whose hair suddenly entangled was described. Le Page attributed this strange incidence to ‘the power of nerves’ [14]. As *plica polonica* it is known as a rare ailment where hair form irregularly convoluted, irreversibly entangled bundles. Other instances were noted in Dubreuilh in 1902, De Amis in 1923, Ohman and Dumesnil in 1923, Grahm in 1952, Mozer in 1995, Friedlietal in 2000 and Kumar in 2001 [15]. As Simpson describes *plica neuropathica* based on a patient who suffered from anxiety disorder and clinical depression, he lists factors inclining to *plica neuropathica* occurrence. These are: curly hair, shampoo use, fever and mental disorders [16]. In a case of a 20-year-old woman, described by Khare in 1985, *plica neuropathica* was associated with the long-term (6 months) influence of stress [17]. There was also a case of *plica neuropathica* occurring in a patient suffering from pancytopenia caused by azathioprine treatment [18].

Case report

We would like to present a case of a 51-year-old patient, admitted in 2011 to a private nursing home due to her general inability to perform both simple and complex activities of daily living. A year before, as stated in her medical record, she had suffered an ischemic stroke in a form of a left sided hemiplegia. During her stay in the hospital she was also diagnosed with an organic personality disorder and chronic headaches. During the medical examination in the private nursing home, her Polish plait caught everyone’s attention – the bundle of entangled hair had its roots in the parietal lobe area and reached to the middle of the patient’s back. The plait was 60 centimetres long with 16 centimetres in diameter. The patient gladly discussed her plait, claiming that its very roots spread all the way down to her feet and they are responsible



for her medical condition. She explained that the plait appeared overnight three years ago. It was impossible to verify by her family, because at the time she lived abroad. The patient said she would not get rid of the plait for fear of ending up paralysed and not able to walk. She also mentioned a case in which one patient decided to cut the plait and lost the use of both legs shortly thereafter. Because her statements clearly indicated delusions of control, the patient was referred to a psychiatrist, who diagnosed her with paranoid

schizophrenia and prescribed olanzapine, dose-escalation up to 10 milligrams. As a result of the treatment the patient gradually regained her ability to take care of herself and after six weeks the patient agreed to cut the plait and eventually, as she said, to tidy up her hair.

The patient returned home with the advice to continue treatment in the nearest mental health centre.

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