CASE REPORTS

The Association Between Helicobacter Pylori Chronic Gastritis, Psychological Trauma and Somatization Disorder. A Case Report

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Abstract

Helicobacter Pylori is considered to be the agent responsible for peptic ulcers and gastritis, and its eradication represents a main objective in the treatment of digestive diseases. We present the case report of a female patient diagnosed with chronic Helicobacter Pylori infection, where symptoms manifested after the patient was raped. In the context of psychological trauma, digestive manifestations such as ulcer and gastritis were identified, greatly exacerbated as compared with the endoscopic and histological aspect of the gastric mucosa. The patient simultaneously developed a complex psychiatric pathology. The association between Helicobacter Pylori chronic gastritis, somatization and trauma is discussed.

Key words

Helicobacter Pylori – chronic gastritis – trauma.

Introduction

The 20th century has presented a bio-psycho-social model of the disease, implying that genetic and early environmental factors may shape an individual's predisposition to the disease, in which biological, psychological and social variables may determine the onset and subsequent course of a clinical disorder [1].

Case report

A female patient, aged 17 years and 5 months, was sent to our psychiatry unit in order to identify the presence of potential psychological factors which sustained and aggravated her gastric pathology, and to evaluate certain memory disturbances. The reasons for admission to hospital were intense epigastric pain, heartburn, hematemesis, melena, headache, paresthesia of the hand and right lower extremity and cyclic amnesia. She was evaluated in a medical unit, which referred the patient to the psychiatry unit due to the fact that the intensity and the duration of digestive symptoms were much stronger as compared with the existing diagnosis of chronic gastritis.

The patient had complained of gastric symptoms since 2007, the year in which she was a victim of a traumatic experience (rape). Five months after the trauma she fainted and was examined in the emergency ward; she was discovered to be 5 months pregnant, a moment which marked the onset of dissociative psychosis. After giving birth to a baby girl, the mental symptoms intensified, and she was followed-up by an outpatient unit which prescribed antipsychotic and anxiolytic treatment, followed for one year.

In 2007 she was diagnosed with a bleeding gastric ulcer (the patient presented two medical letters issued by the surgical clinic with two exploratory laparotomies, but no evidence of gastric resection). In 2008 she had an appendectomy. In 2010 she was again examined with a bleeding gastric ulcer, having hematemesis, secondary anemia, hypocalcemic tetany (documented by a medical report). Previous medical reports presented by the patient showed that she had underwent periodic treatments of 7-10 days duration for chronic gastritis with Helicobacter Pylori (HP) infection. The patient insisted on having three upper digestive endoscopies in the course of the current year (2011) in order to find the cause of hematemesis. All the documents showed that the esophagus, the duodenum and stomach had a normal endoscopic aspect.

The family history offered no relevant data. The patient did not consume drugs, alcohol and did not smoke. A more detailed questionnaire revealed that the patient made the effort and succeeded in manually extracting two molars, swallowing the blood resulting from the dental wounds.

From 2007 onwards, the patient also intermittently complained of chest and back pains, which were investigated without finding pathological changes.

Examination of her oral cavity revealed post dental self-

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extraction wounds. She presented moderate abdominal pain at palpation, and a visible xypho-umbilical scar, secondary to the exploratory laparotomies, and a post-appendectomy scar in the right iliac fossa. The stool had the aspect of melena.

The psychiatric and psychological examination revealed: deficient amnesia on three episodes (when she goes to the place where the rape happened, she "awakens", doesn't know who she is, checks her ID card for her name and address), irritability, emotional weakness, diminished self-defense instinct; she blocked herself when attempting to discuss the trauma suffered, spoke of her daughter as if she were her sister, has a craving for attention, need to impress her entourage, normal intellectual ability, developing personality with unstable psycho-affective elements, state of depression and diminished tolerance to stress, sleep complaints, impulsive and aggressive tendency.

The neurological examination showed unsystematic hypoesthesia in the right upper limb.

Laboratory investigations were normal, except mild anemia: erythrocyte count 4.38 mil/µl (VN=4.3-5.4), hemoglobin 10.8 g/dl (VN=12.1-17.2); hematocrit 34.4% (36.8-50.2), mean erythrocyte volume 78.4 fl (VN=83-93), mean erythrocyte hemoglobin 24.7pg (VN=26.8-31.8).

At the upper digestive endoscopy repeated on admission, oesophagus, gastric body, duodenum evidenced a normal endoscopic aspect. The histopathological examination showed a superficial chronic gastritis, with a moderate inflammatory infiltration with round-nuclear and rare PMN cells in the chorion, and presence of HP.

The oto-rhino-pharyngeal examination evidenced a normal aspect. The EEG in the awake state presented hypovolted trajectory, insufficiently developed, slower in right centro-parietal derivations (lesional?). A cerebral angio MRI scan was then recommended. This revealed a millimetric lesion most probably of an inflammatory nature located at the left external capsule level; without any further focal cerebral lesions; without super or infratentorial tumor formations; non-dilated symmetrical ventricular system. A repeat scan at 6 months was recommended.

We established the diagnosis of superficial chronic gastritis with HP infection, melena following ingestion of blood resulting from the dental auto extraction wound, mild anemia, somatization disease and post-traumatic stress syndrome.

Discussion

Rape represented the "trigger" factor which coincided with the onset of a series of painful recurrent digestive syndromes, the patient being diagnosed with chronic gastritis, a renal cyst, appendicitis. For certain digestive complaints, even surgical interventions were performed. The patient simultaneously developed a complex psychiatric picture: acute reaction to stress, post-traumatic stress disorder, dissociative psychosis, post psychotic depression.

As a reaction to trauma the patient developed a separate personality from which she could not access information related to the rape, and another one (to the forefront during anamnestic incursions or during hypnosis) in which she relived the traumatic event. The feelings blocked by the impossibility of verbalization found an outlet through the body, in the form of pain with different locations (predominantly digestive tract), paresthesia alternating with painful anaesthesia (she manually extracted two of her molars, while hematemesis and melena proved to be the result of inducing haemorhage in the dental insertion slots).

The complaints reported by the patient exceeded the usual complaints of gastritis. The patient presented a history of multiple somatic complains, occurring over two years (epigastric pain, pain in the lower abdomen, precardial and back pain, hematemesis, melena), which could not be fully justifiable by a commonly accepted medical condition [2].

Numerous studies have tried to verify the hypothesis that trauma can trigger gastric pathology; however, data is conflicting [3-5]. Gastritis and peptic ulcer were initially described as psychosomatic pathology, having as vulnerability factors an ambitious or dependent personality. But because no strong association was discovered between the psychogenetic factors and the digestive symptoms or the endoscopic aspect of the stomach, research was gradually oriented towards the discovery of other etiologies [6, 7].

Over the past decades, in the pathogenesis of ulcer and gastritis the role of HP infection and of non steroid anti-inflammatory drugs (NSAIDs) has been documented. Epidemiological studies have shown that despite the decrease in the HP prevalence in Western countries and the increase in the availability of anti-HP drug therapy, the prevalence of peptic diseases is relatively high [8]. A proportion of those infected with HP do not develop gastric pathology [6]. In 5-20% of the patients with gastric disease no etiologic factors are identified [9, 10].

Some studies evaluated the association between early trauma, anxiety and gastric ulcer/gastritis [11]. There are several explanations for this association. Starting from the onset at an early age of generalized anxiety, the idea was postulated that chronic anxiety could in time determine dyspeptic symptoms, as well as peptic diseases [11]. The hypothesis of a common genetic predisposition for anxiety and ulcer was issued [12]. Proof also exists that the recurrence of gastritis/ulcer can be associated with the presence of stressful life events [13]. An association between acute stress (earthquake, for example) and heightening of induced gastric lesions with HP was also identified [14].

Based on the data presented by the patient, we do not consider that her clinical picture was the expression of chronic HP positive gastritis. The exacerbation of abdominal pains took place in the psychological context of the patient. Self mutilation (tooth extraction) expresses the patient's intention (through bleeding) to make the digestive pains more plausible. The confirmation that she suffers from a severe digestive disease would enable her to substitute the tribulations generated by the gastric pain.

A prospective study carried out on 2,416 patients not diagnosed with an ulcer showed that the use of minor

tranquilizers (benzodiazepine) was statistically equally associated with the onset of a gastric ulcer as HP [1]. Our patient also followed anxiolytic treatment for almost one year.

The Alameda study, conducted by Levenstein, has demonstrated the fact that depression and anomia are associated with gastritis and ulcers [15].

Another study, carried out on 4,511 adults from the USA showed that persons who declared themselves to be subjected to stress were twice as likely to be exposed to ulcer/gastritis in the following 13 years, as compared with those who did not describe themselves as being stressed [1]. Successful HP treatment in patients with recurrent ulcers lead to the normalization of anxiety levels and neuroticism [16, 17].

Conclusion

From the presentation of this case, the following conclusion was drawn: melena and hematemesis do not always express a disease of the upper digestive tract. We should keep this in mind when treating patients who have undergone psychological trauma.

Conflicts of interest

None to declare.

References

1. Francis Creed. Gastrointestinal disease. In: *Psychosomatic Medicine*. Blumenfield M, Strain J. (eds). Lippincott Williams and Wilkins, Philadelphia 2009, 145-157.
2. Tulburarea de somatizare. In: *Manual de diagnostic si statistica a tulburarilor mentale*. Ed IV revizuita. Asoc Psih Liberi din Romania. Bucharest 2003, 486-490.
3. Peters MN , Richardson CT. Stressful life events, acid hypersecretion, and ulcer disease. Gastroenterology 1983; 1: 114–119.
4. Freston JW. Review article: role of proton pump inhibitors in non-H. pylori-related ulcers. Aliment Pharmacol Ther 2001;15 Suppl 2: 2-5.
5. Weisman AD. A study of the psychodynamics of duodenal ulcer exacerbations; with special reference to treatment and the problem of specificity. Psychosom Med 1956;18: 2–42.
6. Marshall BJ. Helicobacter pylori in peptic ulcer: have Koch's postulates been fulfilled? Ann Med 1995;27: 565–568.
7. Piper DW, Tennant C. Stress and personality in patients with chronic peptic ulcer. J Clin Gastroenterol 1993; 16:211–214.
8. Sugiyama T, Nishikawa K, Komatsu Y, et al. Attributable risk of H. pylori in peptic ulcer disease: does declining prevalence of infection in general population explain increasing frequency of non-H. pylori ulcers? Dig Dis Sci 2001; 46: 307–310.
9. McColl KE, el-Nujumi AM, Chittajallu RS, et al. A study of the pathogenesis of Helicobacter pylori negative chronic duodenal ulceration. Gut 1993; 34:762–768.
10. Konturek SJ, Bielanski W, Plonka M, et al. Helicobacter pylori, non-steroidal anti-inflammatory drugs and smoking in risk pattern of gastroduodenal ulcers. Scand J Gastroenterol 2003;9: 923–930.
11. Kessler RC, Keller MB, Wittchen HU. The epidemiology of generalized anxiety disorder. Psychiatr Clin North Am 2001;24:19-39.
12. Weiner H. From simplicity to complexity (1950-1990): the case of peptic ulceration--II. Animal studies. Psychosom Med 1991; 53: 491-516.
13. Ellard K, Beaurepaire J, Jones M, Piper D, Tennant C. Acute and chronic stress in duodenal ulcer disease. Gastroenterology 1990, 99: 1628-1632.
14. Matsushima Y, Aoyama N, Fukuda Het al. Gastric ulcer formation after the Hanshin-Awaji earthquake: a case-study of Helicobacter pylori infection and stress-induced gastric ulcers. Helicobacter 1999; 4: 94-99.
15. Levenstein S. The very model of a modern etiology: a biopsychosocial view of peptic ulcer. Psychosom Med 2000; 62: 176-185.
16. Drossman DA. Presidential address: Gastrointestinal illness and the biopsychosocial model. Psychosom Med 1998; 60: 258-267.
17. Jones MP. The role of psychosocial factors in peptic ulcer disease: bBeyond Helicobacter pylori and NSAIDs. J Psychosom Res 2006; 60: 407-412.