

Evolution of Reproductive Disorders Related to Celiac Disease Under Gluten-free Diet

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Abstract

Introduction: Celiac disease is an autoimmune enteropathy induced by the ingestion of gluten (wheat, barley, rye). The classical form has become a minority. Currently, the most frequent forms of presentation are extra-intestinal with various manifestations, among others, reproductive disorders. The aim of our study is to assess the frequency of these disorders in celiac disease and their evolution under gluten-free diet.

Materials and methods: Descriptive retrospective study of 173 patients with celiac disease followed in the department of diseases of the digestive tract "Médecine C" of the Ibn Sina Hospital in Rabat, over a period of 18 years.

Result: In 173 patients with celiac disease, 58 patients (28.9%) had reproductive disorders. There are 53 women and 5 men. The average age was 25-32 years. The diagnosis of celiac disease is based on histology and serology. The reproductive problems were never isolated but always associated with other digestive or extra-intestinal signs at the time of diagnosis of celiac disease. These disorders are represented by: delayed puberty in 11 cases (19%), secondary amenorrhea in 13 cases (22.4%), irregular menstrual in 12 cases (20.6%), absence of development of secondary sex characteristics in 8 cases (12.5%), spontaneous abortions in 7 cases (10.9%), menometrorrhagia in 4 cases (13.8%), primary sterility in 5 cases (8.6%), early menopause in 6 cases (10.3%), premature delivery in 3 cases (5%), primary amenorrhea in 2 cases (3.4%) and intrauterine fetal death in one case (1.7%). All our patients have had a gluten-free diet. 15 patients lost to follow-up, two patients died and 12 patients undergoing follow-up. The remaining 29 patients, the evolution of reproductive disorders under gluten-free diet was favourable in 26 cases (90%), with the normalization of cycles in 15 cases, resumption of cycles in 6 cases, development of secondary sex characteristics in 2 cases, fertility resumption in one case, initiation of cycles after primary amenorrhea in one case and delivery of a new-born at term after premature deliveries in one case. The evolution was unfavourable in 3 cases with the notion of miscarriage 4 years after the start of the gluten-free diet in one patient and the absence of cycle resumption in two cases.

Conclusion: The reproductive disorders associated with celiac disease are frequent and varied. In our study, these disorders responded very well under a gluten-free diet, conducted in 90% of cases. These disorders are thus reversible under this diet.

Keywords: Celiac disease; Reproductive disorders; Gluten-free diet

Result

Introduction

Celiac disease is an immune system enteropathy instigated by the ingestion of gluten (wheat, grain, rye) in hereditarily inclined subjects prompting atrophic sores of the little inside, backward under without gluten count calories. The classical form has become a minority. Currently, the most frequent forms of presentation are extra-intestinal with various manifestations, among others, reproductive disorders. The aim of our study is to assess the frequency of these disorders in celiac disease and their evolution under a gluten-free diet.

Materials and Methods

Descriptive retrospective study of 173 patients with celiac disease followed in the department of diseases of the digestive tract "Médecine C" of the Ibn Sina Hospital in Rabat, over a period of 18 years.

In 173 patients with celiac disease, 58 patients (28.9%) had reproductive disorders. There are 53 women and 5 men. The average age was 25-32 years. The diagnosis of celiac disease is based on histology (severe or partial villous atrophy with intraepithelial lymphocytosis exceeding 30%) and serology (Antigliadin and/or antiendomysium and/or anti-transglutaminase positive antibodies). The reproductive problems were never isolated but always associated with other digestive or extra-intestinal signs at the time of diagnosis of celiac disease. These disorders are represented by: delayed puberty in 11 cases (19%), secondary amenorrhea in 13 cases (22.4%), irregular menstrual in 12 cases (20.6%), absence of development of secondary sex characteristics in 8 cases (12.5%), spontaneous abortions in 7 cases (10.9%), menometrorrhagia in 4 cases (13.8%), primary sterility in 5 cases (8.6%), early menopause in 6 cases (10.3%), premature delivery in 3 cases (5%), primary amenorrhea in 2 cases (3.4%) and intrauterine fetal death in one case (1.7%) (Figure 1).

All our patients have had a gluten-free diet. 15 patients lost to follow-up, two patients died and 12 patients undergoing follow-up. The remaining 29 patients, the evolution of reproductive disorders under gluten-free diet was favourable in 26 cases (90%), with the normalization of cycles in 15 cases, resumption of cycles in 6 cases, development of secondary sex characteristics in 2 cases, fertility resumption in one case, initiation of cycles after primary amenorrhea in one case and delivery of a new-born at term after premature deliveries in one case. The evolution was unfavourable in 3 cases with the notion of miscarriage 4 years after the start of the gluten-free diet in one patient and the absence of cycle resumption in two cases.

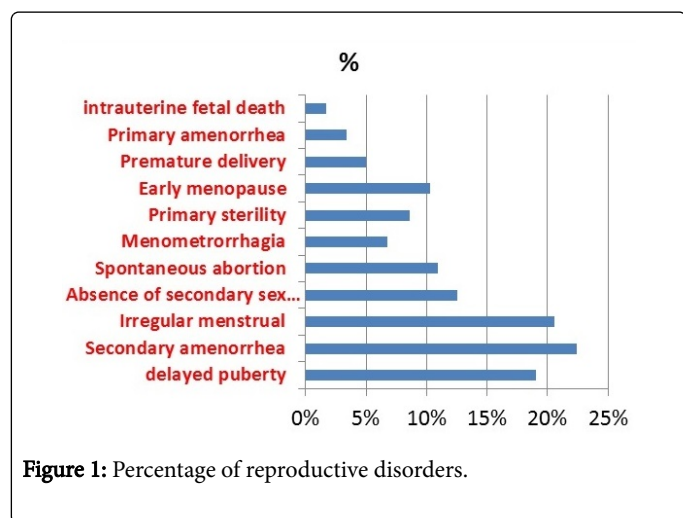


Figure 1: Percentage of reproductive disorders.

Discussion

Celiac sickness is a mucosal issue of the small digestive tract that might be activated by dietary presentation to gluten in hereditarily

Altered female fertility	Deferred onset of menarche, amenorrhea, early menopause, intermittent premature births, diminished rates of pregnancy
Altered male fertility	Gonadal dysfunction, altered sperm morphology and motility, reduced sexual activity
Alterations in pregnancy	Rehashed unnatural birth cycles, unexpected labor a debilitated fetal development with low birth weight, unusual placental capacity
Postpartum activation of celiac disease	Hormonal or immune changes

Table 1: Reproductive changes in celiac disease.

Contemplates from Poland and Italy [4,5] likewise assessed menarcheal period of celiac young ladies with reference to maternal menarcheal age. In one [4], menarcheal time of celiac young ladies gave off an impression of being controlled by a sans gluten eat less, while in the other [5], menarcheal age in celiac infection was not deferred, but rather was influenced by maternal menarcheal age. A further assessment from the United Kingdom [6], recommended that celiacs are subfertile with an expanded rate of stillbirths and perinatal passings. Be that as it may, after analysis of celiac malady and treatment with a without gluten consume less calories, a few markers of barrenness (e.g. unnatural birth cycle rates) might be rectified. Contemplates evaluating commonness of male barrenness in celiac ailment have been uncommon. In any case, two later Italian productions have investigated sexual conduct [7,8]. In one review,

helpless people. The turmoil is frequently connected with looseness of the bowels, malabsorption and weight reduction alongside other additional intestinal entanglements. Regenerative changes have been portrayed, including impeded ripeness and unfriendly pregnancy results potentially identified with invulnerable intervened components or supplement inadequacy. Other conceivable pathogenetic components that may modify placental capacity incorporate maternal celiac malady autoantibodies official to placental transglutaminase, and hereditary transformations that may encourage microthrombus arrangement. Reports taking note of enactment amid pregnancy or the puerperium might be essential, and recommend that celiac ailment may likewise be speculatively encouraged by maternal introduction to at least one fetal antigens. Lately, there has been an expanded acknowledgment of conceivable changes in male and female fruitfulness in celiac malady and also the potential for unfavourable results in pregnancy and the baby blues period that may prompt unsuccessful labors and untimely low birth weight fetal conveyances (Table 1).

Deferred onset of menarche, amenorrhea, early menopause, repetitive premature births and lessened rates of pregnancy in celiac sickness may mirror a weakness of ripeness [1]. In 74 celiac patients from the United Kingdom [2], the regenerative period was longer for those on a sans gluten eat less contrasted with those not on an eating regimen but rather maternal well-being was not truly disabled. A lower frequency of unconstrained premature births in celiacs on a sans gluten eating routine was additionally recorded. Comparable outcomes were accounted for in an Italian study [3]. In continuously analyzed celiacs contrasted with age-coordinated solid controls, there was a "sexual conduct" and huge deferral in the mean period of menarche in untreated celiac patients (13.5 years contrasted with 12.1 years). Amenorrhea and rehashed premature births were more typical in the celiac gathering, however onset of menopause did not fundamentally contrast.

sexual practices in treated and untreated celiac sickness patients were inspected utilizing a survey and contrasted with sound controls [7].

Sexual fulfillment, including recurrence of intercourse, was decreased in celiac patients, yet enhanced following a time of treatment with a sans gluten consume less calories. In the other [8], sexual propensities gave off an impression of being altogether different in celiacs who were never treated with a sans gluten consume less calories. Celiac infection, particularly if untreated, seems to build the danger of rehashed unsuccessful labors and untimely conveyances, and disabled fetal development with decreased birth weight [9]. Moreover, unfriendly consequences for the mother may likewise happen, as shown by a current German review which exhibited that the rate of cesarean conveyance was expanded if the guardians had celiac ailment contrasted with other stomach related illness controls and additionally

controls from eye or dental outpatient facilities [10]. In a case-control examine from Italy that assessed 94 untreated and 31 treated celiacs, the relative dangers of either fetus removal or conveying a low birth weight infant were expanded while the length of bosom sustaining was fundamentally decreased [11]. These progressions were clearly revised with a sans gluten eat less carbs [11]. Higher rates of either unnatural birth cycles or unconstrained premature births were likewise recorded from different focuses situated in various nations including Argentina, Italy and the United Kingdom [2,3,6,12].

Conclusion

The reproductive disorders associated with celiac disease are frequent and varied. In our study, these disorders responded very well under a gluten-free diet, conducted in 90% of cases. These disorders are thus reversible under this diet.

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