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Pregnancy in acute and chronic ulcerative colitis: Case reports

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ABSTRACT

Ulcerative colitis is an autoimmune idiopathic chronic relapsing inflammatory bowel disease involving the mucosa and the submucosa of the large bowel starting at the rectum. Acute disease occurring for the first time in pregnancy is not common and has the Truelove and Witt's criteria for defining acute ulcerative colitis. Acute ulcerative colitis in pregnancy is difficult to diagnose and carries the risk of pre-term birth as well as fetal growth restriction along with fetal malformations if not treated aggressively. Drugs and investigations safe in pregnancy along with appropriate care of the patient can improve the pregnancy outcome and patient's health. Chronic ulcerative colitis patients have exacerbations in pregnancy or early postpartum. These patients may have poor absorption in spite of proper medication and have difficulty in building up the hemoglobin levels during pregnancy. Here, we are reporting two cases, one each of acute as well as chronic ulcerative colitis in pregnancy with their investigations, treatment, and outcome in respect to maternal health during the entire pregnancy as well as fetal growth and complications.

Key words: *Management, Pregnancy, Ulcerative colitis*

Ulcerative colitis is an idiopathic inflammatory, chronic, and relapsing bowel disease involving the mucosa and submucosa of the large bowel beginning at the rectum. It is an autoimmune disease caused by the abnormal activation of the immune system of the bowel. Its peak occurrence in the females is the reproductive period between 20 and 40 years of age. Ulcerative colitis was first described by Sir Samuel Wills in 1859. Acute ulcerative colitis can be defined according to the original criteria set forth by Truelove and Witt's: Six or more stools per day with either a body temperature of >37.8°C, pulse rate of >90/min, large amount of blood in the stools, a hemogram of <10.5 g/dl, or an erythrocyte sedimentation rate of >30 m/h. Both American College of Gastroenterology Practice Guidelines and the European Crohns and Colitis Organisation define severe colitis similarly [1]. Other indices for defining severity include the modified mayo's classification which is a combination of clinical and endoscopic findings and Montreal classification which is primarily based on Truelove and Witt's criteria [2]. we are hereby reporting one case each of acute and chronic ulcerative colitis in pregnancy with their outcome.

CASE REPORTS

Case 1

A 28-year-old second Para (previous lower segment cesarean section) presented with severe diarrhoea at 26 weeks of pregnancy. She was passing 15-20 stools/day along with frank blood for the past 1 month. She was clinically anemic, afebrile with a pulse rate of 90/min. Her blood pressure was 110/70 mm-Hg. Uterus was slightly less than dates with regular fetal heart. On investigations: Hb was 7.4 gms%, sugars were normal, urine had few pus cells, and the stool examination showed pus cells full field, and red blood cell 10-15 per hpf. She was initially treated with intravenous (IV) antibiotics and fluids, there was only slight improvement in her condition and frequency of stool but blood persisted with the stools. Hence, colonoscopic biopsy was done without preparation by the gastroenterologist, which showed: The colonic mucosa to be diseased from the rectum for about 15 cm from the anal verge. The rest of the colonic mucosa was normal, the vascular pattern was lost, the light reflex was broken, and there were multiple superficial ulcers, no friability, polyp, or growth was seen (Fig. 1).

The histopathology showed colonic glands with chronic inflammatory stroma comprising of lymphocytes, plasma cells, and leukocytes. She was diagnosed of having acute ulcerative colitis with pregnancy. She was put on tablet asacol and mesacol (mesalamine) enema besides steroids and other supportive treatment. There was tremendous improvement in her general condition and she was passing stools only 1-2 times a day with minimal blood, occasionally. Her hemoglobin started rising and was 11.8 gms% at 39 weeks of pregnancy. She had a weight gain of 10 kg from 26 weeks till 39 weeks (Fig. 2). She came to the hospital in active labor with cervical dilatation and descent of the vertex; hence, she was delivered vaginally even though she had a previous cesarean section and the baby weighed 3.0 kg. On post-delivery, her problems persisted with exacerbations for which repeat colonoscopy was done which showed superficial ulcers in the rectum and sigmoid colon for 15 cm from the anal verge and

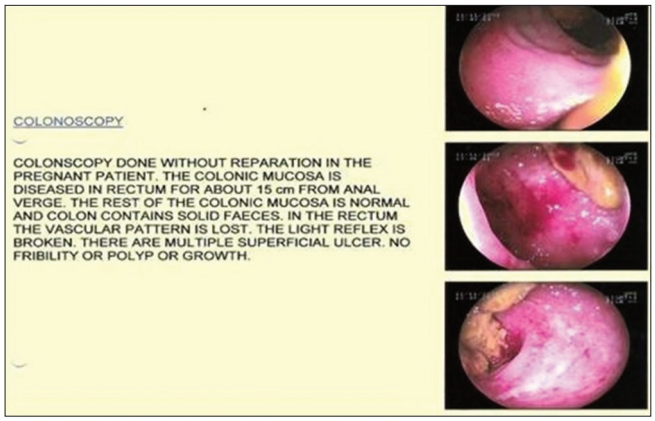

Figure 1: Colonoscopic findings of patient with acute ulcerative colitis in pregnancy

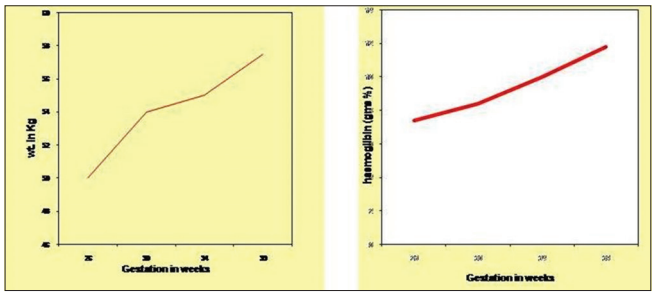

Figure 2: Weight gain and hemoglobin from 26 weeks to 39 weeks in patient with acute ulcerative colitis

the patient was referred back to the gastroenterologist for further management.

Case 2

A 27-year-old, known case of ulcerative colitis on treatment with oral mesalazine, containing 5-aminosalicylates (5-ASA) off and on whenever she was symptomatic, became pregnant. She was already under treatment and continued with the advice of the gastroenterologist. She was clinically asymptomatic when she became pregnant and had hemoglobin of 11 gms%, and weighed 50 kg. She needed admission only once during the pregnancy for severe pain abdomen with diarrhea and blood in the stools occasionally, she was treated with 5-ASA, and mesacol suppositories along with the other supportive treatments but did not require steroids. She was on proper medication and pregnancy care but her hemoglobin, which fell initially, did not rise as per the expectations and requirement. Her weight gain though was within normal limits. She gained around ten kg of weight from 6 weeks of pregnancy till 39 weeks of pregnancy (Fig. 3). She had a cesarean section at 39 weeks due to leaking, unfavorable cervix, and a history of chronic ulcerative colitis. She had a healthy baby weighing 3.0 kg. Post-delivery during puerperium, there was no exacerbation of the disease as she continued with her regular treatment.

DISCUSSION

Ulcerative colitis is characterized by a relapsing and remitting course of variable severity in the majority of patients with

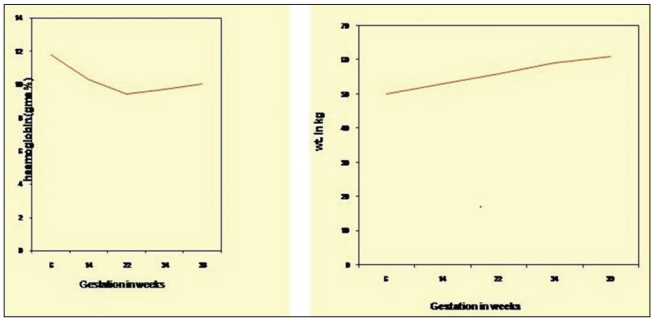

Figure 3: Weight gain and hemoglobin from 6 weeks to 39 weeks in patient with chronic ulcerative colitis

mild-to-moderate degree of the disease [1]. The initial presentation of ulcerative colitis in pregnancy is unusual. Diagnosis and management are difficult because of the risk of malformations to the fetus due to drug exposure including heavy steroids and risk of preterm labor due to bowel preparations and invasive procedures such as biopsy taking, and also because of the other causes of diarrhea of a benign nature which may obscure the diagnosis and make action difficult [3]. In our first case, the patient was having diarrhea with blood in the stools for over a month and she became anemic with the start of a growth restricted fetus, but once she was diagnosed and treated for ulcerative colitis, she not only started gaining weight but her hemoglobin also started rising and she had a healthy baby of 3.0 kg.

It is critical to optimize aggressive medical treatment for the health of the mother and fetus both or the risk of preterm birth, low birth weight, and other adverse fetal outcome increases [4]. Ulcerative colitis during pregnancy which is refractory to medical therapy can lead to the development of toxic mega colon, characterized pathologically with severe transmural inflammation with infiltration of the colonic wall by neutrophils, lymphocytes, histocytes, and plasma cells. The most significant risk of toxic mega colon is perforation into the surrounding peritoneal cavity and has a considerable mortality rate due to the sequelae of sepsis [5].

In our second case, the patient had chronic ulcerative colitis and was on treatment whenever required. Due to the chronic nature of the disease, the patient had poor absorption, and iron intolerance; hence, though she was not anemic to start with, her hemoglobin fell initially, and further did not rise in spite of iron supplements as expected. She was appropriately treated during pregnancy and did not face any untoward effects of the disease, her weight gain was also within normal limits and she delivered a 3.25 kg baby. Known cases of ulcerative colitis have roughly 30% chances of an exacerbation which is not infrequent in the first trimester but rarely, occurs in the second and third trimester. Pregnancy is not recommended unless the disease is inactive or quiescent as otherwise it will continue to be active or worsen during pregnancy. It is suggested that pregnant women with fulminant ulcerative colitis should have a cesarean section rather than risk the chances of sphincter damage during vaginal delivery as the surgical treatment of ulcerative colitis with ileal pouch construction requires an intact sphincter mechanism to be successful [3].

Upper gastrointestinal endoscopy and colonoscopy are safe during pregnancy with minimal fetal risk [6]. Drug regime is patient dependent but the amino salicylates (mesalamine, sulfasalazine), thiopurine, and antitumor necrosis factor classes are generally considered safe in pregnancy. Mesalazines are better tolerated orally than sulfasalazines and a daily dosage of 2-2.5 g should be generally effective but patients not responding may need higher doses. Mesacol enema and suppositories are required in the active phase of the disease with bloody diarrhea. Suppositories are known to have a better effect due to the availability of the medicine for a longer duration on the colonic mucosa for its anti-inflammatory effect by suppressing prostaglandin synthesis. Acute ulcerative colitis requires treatment with high dose IV corticosteroids. Various other drugs such as cyclosporine and infliximab are tried in patients unresponsive to corticosteroids. Active therapy and timing of the dosage can avoid treatment in the later weeks of pregnancy to prevent placental transfer of these drugs [7]. Primary management of ulcerative colitis is medical, and surgical indications are toxic colitis, perforation, bleeding, strictures, neoplasm, and failure of medical management. Ulerative colitis has a 30% increased risk of developing colon cancer [7].

CONCLUSION

Ulcerative colitis patients have an exacerbation during pregnancy and early postpartum. Active ulcerative colitis presenting for the first time in pregnancy is rare and unusual, but active management during pregnancy can reduce the complications of premature birth and low birth weight besides other adverse effects on the fetus and the mother. Early admission in chronic ulcerative colitis with the aim of induction and maintenance of remission is very important for the well-being of the mother and the growing fetus.

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