

# Gilbert Syndrome in Pregnancy: A Case Report

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**Abstract**—Gilbert syndrome is a rare condition and rarely diagnosed before pregnancy. A 36 weeks pregnant female presented with severe vomiting, nausea, myalgia, abdominal pain, headache and yellowish discoloration of sclera, yellowish discoloration of skin since four days. She gave history of similar complaints at 16 & 24 weeks in this pregnancy and was treated conservatively with IV fluids. She have similar episodes in second pregnancy. When she was investigated, she came out to a case of Gilbert syndrome which is a rare case. So she was examined and investigated thoroughly to prepare a case report to publish. To conclude when any patient presents with unconjugated hyperbilirubinaemia associated with stress, infection or dehydration Gilbert Syndrome must be excluded. Once this diagnosis is made patient must be reassured of its benign nature, excellent prognosis and normal life expectancy.

**Key words:** Gilbert syndrome, unconjugated hyperbilirubinaemia, Pregnancy.

## I. INTRODUCTION

Gilbert Syndrome is a benign and often familial condition characterized by recurrent mild unconjugated hyperbilirubinaemia in the absence of haemolysis or underlying liver diseases. Augustine Gilbert and Pierre Lerebullet first described Gilbert syndrome in 1901. Although various investigators have used other names for this disorder, such as constitutional hepatic dysfunction, hereditary haemolytic bilirubinaemia, and familial nonhaemolytic jaundice, Gilbert syndrome is the most commonly used name for this condition.<sup>1</sup>

Gilbert syndrome is rarely diagnosed before puberty though it is a congenital disorder. Hormonal changes of puberty have been suggested as one explanation.<sup>2</sup> Dehydration, Fasting, Exercise, Menstruation, non eating or stress precipitates Gilbert syndrome.<sup>3</sup> It is found in 7% of general population.<sup>4</sup> It is common among men than women in the ratio of 2-7:1.<sup>5</sup> The hyperbilirubinaemia is mild and by definition < 6mg/dL.

This case is reported for its rare incidence in pregnancy and its typical clinical features with which the patient presented.

## II. METHODOLOGY

A rare case of Gilbert syndrome (GS) in pregnancy was presented in Gynecology department of JLN hospital, Ajmer (Rajasthan) India. It is a very rare case and had typical presentation so examined and investigated thoroughly to prepare a detailed case report to published.

## III. CASE REPORT

A 36 weeks pregnant women presented at emergency with severe vomiting, nausea, myalgia, abdominal pain, headache and yellowish discoloration of sclera, yellowish discoloration of skin since four days. She was G3P1+(1) with history of previous 2 cesarean section with first baby expire due to kernicterus. She was appreciating fetal movements well and having no complains of itching or pale colour stools.

The patient gave history of similar complaints at 16 & 24 weeks in this pregnancy and was treated conservatively with IV fluids. She has similar episodes in second pregnancy

On general examination, she was conscious, co-operative and oriented. She was dehydrated (check by dry skin and dry mouth and tongue), had icterus without pallor. Her blood pressure was found to be 90/60 mm of Hg. Yellowish discoloration of skin present.

On obstetric examination, Uterus corresponded to dates with vertex presentation with normal centrally placed umbilicus with presence of normal linea nigra and stria gravidarum. The fetal heart rate was 148/min. Patient perceive fetal movement well No any per vaginal bleeding.

On investigations, Blood test revealed that RBC , WBC , PLATLETS, RETICULOCYTE count was normal with normal range of BT , CT , PT INR. Liver function test was normal except Serum Bilirubin which was 6 mg/dl, the indirect being 5.4mg/dl and direct bilirubin was 0.6 mg/dl. Viral screening for hepatitis was negative. Urine shows ketone bodies 4+ and random blood sugar (RBS): 54 mg/dL.

USG scan showed a single live fetus corresponding to dates with adequate liquor, Liver was normal, No signs of obstruction.

Patient was treated with I.V. fluids (5%, 25%, RL) to correct dehydration. With correction of dehydration, jaundice resolved spontaneously after 48 hours serum bilirubin decreased to 2mg/dL. The patient improved symptomatically and was discharged.

She again presented at 38 weeks with Prelabour Rupture Of Membranes (PROM). In view of previous two caesarean section, she was taken up for emergency caesarian section and delivered a healthy female child of 2.8 kgs. Mother and baby were fine postoperatively. Baby was observed for hyperbilirubinaemia for five days. Both mother and baby were discharged on day five.

Later she came at six weeks for a routine postnatal check up and was found to be fine.

#### IV. DISCUSSION

Gilbert syndrome is found in 7% of general population.<sup>4</sup> It is rarely diagnosed before puberty though it is a congenital disorder. Hormonal changes of puberty have been suggested as one explanation.<sup>2</sup> Dehydration, Fasting, Exercise, Menstruation, non eating or stress precipitates Gilbert syndrome.<sup>3</sup> It is common among men than women in the ratio of 2-7:1.<sup>5</sup> The hyperbilirubinaemia is mild and by definition < 6mg/dL. In Caucasians a genetic defect in the TATA box of the promoter region of the gene encoding for bilirubin UDP-Glucuronyltransferase is tightly associated with Gilbert's syndrome. Gilbert's syndrome is characterized by a 70–80% reduction in the glucuronidation activity of the enzyme, (UGT1A1). The UGT1A1 gene is located on human chromosome 2.<sup>6</sup>

It is typically inherited in an autosomal recessive pattern and occasionally in an autosomal dominant pattern depending on the type of mutation. Gilbert's syndrome is a phenotypic effect, characterized by mild jaundice due to increased unconjugated bilirubin, that arises from several different genotypic variants of the gene for the enzyme responsible for changing bilirubin to the conjugated form. Gilbert's syndrome may actually reduce the risk of various age-related diseases because of the antioxidant properties of bilirubin. Interestingly, one recent study has found that mortality rates observed for people with Gilbert syndrome in the general population were shown to be almost half those of people without evidence of Gilbert syndrome.<sup>7</sup> People with GS predominantly have elevated unconjugated bilirubin, while conjugated bilirubin is usually within the normal range and is

less than 20% of the total. Levels of bilirubin in GS patients are reported to be from 20  $\mu\text{M}$  to 90  $\mu\text{M}$  (1.2 to 5.3 mg/dl) compared to the normal amount of  $< 20 \mu\text{M}$ . GS patients have a ratio of unconjugated/conjugated (indirect/direct) bilirubin commensurately higher than those without GS. Tests can also detect DNA mutations of UGT1A1 by polymerase chain reaction or DNA fragment sequencing.

Alkaline methanolysis and thin-layer chromatography have been used to diagnose Gilbert syndrome by accurately separating and measuring total serum as conjugated and unconjugated fractions. High-performance liquid chromatography (HPLC) of serum showed similar findings with significantly decreased bilirubin monoglucuronides (1.1% vs 6.2% in normal) and increased unconjugated bilirubin (98.8 vs 92.6 in normals).<sup>3</sup> The polymerase chain reaction (PCR) is a novel and rapid method of identifying genetic polymorphisms in the TATA box of the UDPGT1 gene using fluorescence resonance energy transfer. Gilbert syndrome is selflimiting and benign with good prognosis.

She was also presented with recurrent constitutional symptoms like fatigue, weakness, tiredness, hypoglycaemia and jaundice which were aggravated due to dehydration following vomiting. On evaluation indirect bilirubin was raised and there were no signs of haemolysis. Patient condition improved on correcting dehydration and the jaundice resolved spontaneously. These salient features helped us to arrive at the diagnosis of Gilbert Syndrome.

Thirty percent of the patients with Gilbert Syndrome are usually asymptomatic. Some patients present with fatigue, weakness, nausea, loss of appetite, jaundice, vomiting, hypoglycaemia, itching and pain abdomen of which itching was absent in our patient. These symptoms are usually precipitated by infection, dehydration or stress and in our patient these were precipitated by dehydration. In Gilbert Syndrome there is recurrent mild jaundice and our patient also presented with mild jaundice at 16 and 24 weeks. We first excluded other inherited causes of unconjugated hyperbilirubinaemia such as Crigler Najjer Syndrome, in this syndrome bilirubin is raised up to 20mg/dl whereas in our patient it was raised up to 6mg/dl only. The other causes of haemolysis and infective causes of jaundice were excluded. Gilbert Syndrome was diagnosed by exclusion.

## V. CONCLUSION

This Gilbert Syndrome case is reported for its rare incidence in pregnancy and its typical clinical features with which the patient presented. To conclude when any patient presents with unconjugated hyperbilirubinaemia associated with stress, infection or dehydration Gilbert Syndrome must be excluded. Once this diagnosis is made patient must be reassured of its benign nature, excellent prognosis and normal life expectancy

## CONFLICT OF INTEREST

None declared till now.

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