INTRODUCTION:
Clinically significant trauma to the cervix is seen in 0.2 – 1.7% of vaginal deliveries.(1) The risk factors associated with bucket handle tear are prolonged labour, scarred cervix, prostaglandin instillation, instrumental delivery and cervical encirclage.(2,3)

CASE:
Our case is that of a 21 year old primigravida who presented with prelabour rupture of membranes at 39 weeks gestation. She had a bucket handle tear of the posterior cervix during labour in the absence of any risk factors.

The patient was taken for an emergency cesarean section and delivered a healthy male infant following which the tear was sutured.

CONCLUSION:
Bucket handle cervical tear though rare in modern obstetrics is still a potential life threatening occurrence for the mother and child even in low risk patients. Untoward consequences can be averted with a high index of suspicion.

CASE:
A 21 year old primigravida, married since 1 year, with spontaneous conception, presented to the labour room at 39 weeks of gestation with complaints of leaking per vaginum. Her last menstrual period was on 12/2/16. She was registered at 5 months gestation with regular antenatal follow up and no high risk factors. There was no significant medical or surgical history in the past.

Her routine investigations were within normal limits- Blood group- B Rh positive HIV, HBsAg, VDRL- negative, OGTT- within normal limits. Anomaly scan done at 19 weeks was normal.

On Examination- Her general condition was fair. She was afebrile. Her vitals were stable. Systemic examination was normal.

On per abdomen examination, uterus was overdistended. Liquor was more than adequate. Cephal was floating. Fetal heart sounds were regular, 140/min. She had uterine activity of 1/10/15.

On per speculum examination (P/S), Cervix and vagina were healthy and there was no leak demonstrable.

On per vaginal examination (P/V), os was 3-4 cm dilated, 40% effaced, membranes were bulging, vertex was at station -3, pelvis was adequate for baby.

USG Obstetrics done 2 days prior was suggestive of corresponding growth with EFW of 3.5 kg and polyhydramnios (AFI-27cm). On admission, Hemoglobin -10gm%, Total leucocyte count- 8600, Platelets- 2.43 lakh.

In view of mild contractions, a controlled artificial rupture of membranes (ARM) was done to augment labour. Review examination was done 4 hours later. She was getting 2-3 contractions every 10 minutes. On P/V- Os was felt to be 4-5 cm dilated, 50% effaced, vertex at station -2, liquor was clear. The anterior lip of the cervix felt edematous and thick. Hence a repeat P/S examination was done which showed a 4-5 cm curvilinear tear seen on the posterior cervical wall (4 O’clock- 8 O’clock) 2 cm proximal to the os. Vertex was seen through the tear. Cervical lip was displaced retropubically. Os was collapsed but stretchable to 3-4 cm.

She was taken for an emergency cesarean section and a healthy male infant of 3.294 kg was delivered. The operation was uneventful. After abdominal closure, patient was given lithotomy position, examination under anaesthesia and cervical tracing confirmed the pre-operative findings. There was no active bleeding from the tear. Cervical tear was sutured with continuous interlocking sutures with polyglactin 910 (vicryl) no.1.

Discussion:
Clinically significant trauma to the cervix is seen in 0.2-1.7% of...
vaginal deliveries.(1)

Risk factors associated with bucket handle cervical tear are:
- Scarred cervix
- Cervical encerclage
- Induction of labour
- Prostaglandin instillation
- Precipitate labour
- Prolonged labour
- Instrumental delivery

Most of the cases reported in literature have been associated with one of the risk factors.

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Year</th>
<th>Diagnosis</th>
<th>Risk factors</th>
<th>Nature of tear</th>
<th>Dilatation of os</th>
<th>Outcome</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Oyelese Y, Landy HJ,</td>
<td>2001</td>
<td>G2A1 with 38 weeks</td>
<td>- Induction with 4 doses of 25 mcg misoprostol</td>
<td>Midline tear on posterior lip extending into cul de sac</td>
<td>3 kg baby delivered vaginally</td>
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<td></td>
<td>Collea JV. Cervical laceration associated with misoprostol induction</td>
<td></td>
<td>gestation</td>
<td>3 hourly apart</td>
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<td>2.</td>
<td>Gurung, Geeta, Sapana</td>
<td>2006</td>
<td>G2A1 with 38 weeks</td>
<td>- Posterior tear 2.5 cm away from os extending to posterior fornix</td>
<td>5 cm</td>
<td>Baby delivered through the tear.</td>
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<td></td>
<td>Amatya, Archana Amatya,</td>
<td></td>
<td>gestation</td>
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<td>Akanchya Rana, Ashma</td>
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<td>Rana, &amp; Akinchan Kafle.</td>
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<td>3.</td>
<td>Oyelese Y, Landy HJ,</td>
<td>2008</td>
<td>Primigravida with 41</td>
<td>- Induction of labour with PGE2 - Precipitate labour</td>
<td>Posterior bucket handle tear</td>
<td>1.5 cm</td>
<td>3.5 kg baby delivered vaginally through the tear.</td>
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<td></td>
<td>Collea JV. Cervical laceration associated with misoprostol induction</td>
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<td>weeks</td>
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<tr>
<td>4.</td>
<td>Chan VYT, Lau WL.</td>
<td>2012</td>
<td>G5P1L1 with 41 weeks</td>
<td>- Pre CIN2 done a year back -3 doses of PGE2, 24 hours apart</td>
<td>4 cm tear at 0’clock position in the os</td>
<td>4.06 kg baby delivered vaginally through the tear.</td>
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<td></td>
<td>Leung WC. Delivery</td>
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<td>gestation</td>
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<td>5.</td>
<td>Djkovic D, Costa C,</td>
<td>2015</td>
<td>G2MTP1 with 41 weeks</td>
<td>- Posterior bucket handle tear from 4 O’clock to 9 O’clock position</td>
<td>closed</td>
<td>3.3 kg baby delivered vaginally through the tear.</td>
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<td></td>
<td>Martins A, Abushad S.</td>
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<td>gestation</td>
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<td></td>
<td>Spontaneous delivery</td>
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In all the cases reported above, the tears were diagnosed post delivery and the baby was found to have delivered through the tear. All the cases were associated with varying degrees of PPH which prompted a careful examination.

What makes our case interesting is that our patient presented in spontaneous labour. She had no history of trauma to the cervix. The tear was diagnosed in 1st stage of labour. Hence timely intervention was possible. The patient could be delivered by an emergency LSCS avoiding further maternal and fetal morbidity.

Conclusion
In modern obstetrics, cervical tear is rare but it is still a potential life threatening event.

Review of literature highlights the need to be more alert in cases of previous history of trauma to cervix. In cases of precipitate labour, one must keep in mind the possibility of delivery through an undiagnosed cervical tear. Prostaglandins for induction of labor should be used judiciously.

Our case highlights that it is important to have a high index of suspicion even in low risk cases. A simple P/S examination in our case helped us to diagnose the tear early and provide timely intervention.

References: