

24% CSE) administered to women. In Group LDE, 64% reduction in immediate pain (VAS score from 7.2 to 2.6) was observed and in the Group CSE, the reduction was 78% (VAS score from 7.9 to 1.72),  $p=0.03$ . Total length of mobility was  $240\pm 132$  minutes in Group LDE and  $202\pm 84$  minutes in group CSE ( $p=0.49$ ). Normal vaginal, instrumented and caesarean delivery rate was 69%, 11% and 20% in Group LDE and 73%, 9% and 18% in Group CSE respectively. Patient satisfaction with LDE and CSE was 78% and 79% respectively. Type of delivery and patient satisfaction showed no significant differences between both techniques.

**Conclusions:** High patient satisfaction was achieved with MRA. While CSE gives significantly less immediate pain scores compared with LDE, the study found no statistical differences in the length of mobility, mode of delivery and patient satisfaction between both techniques.

## 6325

### Rare but Deadly: Management of a Parturient with Guillain-Barre Syndrome

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**Case Report:** 33yo G5P4 parturient at 32 weeks presents with progressive upper and lower extremity weakness following Epstein-Barr virus (EBV) mononucleosis. CSF revealed elevated protein content, and nerve conduction showed a demyelinating polyneuropathy. The results along with history of EBV lead to a diagnosis of Guillain-Barre Syndrome (GBS). Over 10 days, she developed SVT episodes that were treated with labetalol. She progressed to bulbar weakness and was intubated for respiratory failure. She was treated with intravenous immunoglobulins (IVIG) 400mg/kg and plasmapheresis. At 33+5 weeks gestation, preterm contractions began, quickly progressed to 10cm cervical dilation, and was brought to the OR for vaginal delivery. She had 4 previous vaginal deliveries without neuraxial analgesia. Standard ASA monitors were placed and she was connected to a ventilator. IV fentanyl 25mcg was given intermittently. Esmolol and nitroglycerine were readily available for dysautonomia episodes. Vacuum-assisted vaginal delivery was successful with APGAR scores 7 and 9.

**Discussion:** GBS is a progressive peripheral demyelinating disease, beginning in the lower extremities and advancing proximally. Rarely occurs in pregnancy with 1.2 incidences per 100,000 in the US, but 6-24 per 100,000 in poorly developed countries. There is high maternal mortality (3%) secondary to respiratory failure due to increased metabolic demands and reduced lung capacity during pregnancy.<sup>1</sup> It is often associated with gastroenteritis (Campylobacter jejuni), mononucleosis (EBV), or respiratory infection (Cytomegalovirus) 2-4 weeks prior to development of symptoms.<sup>2</sup> Treatment is IVIG or plasmapheresis, along with supportive care. Continuous fetal tracing is required as plasmapheresis can lead to placental hypoperfusion. Dysautonomia presents as SVT and hypertension. Thrombocytopenia is critical due to the hypercoagulability of pregnancy and immobility of GBS. Anesthetic management goals are primarily respiratory support. Succinylcholine should be avoided due to postsynaptic receptor upregulation and hyperkalemia. There are no contraindications to neuraxial anesthesia.<sup>3</sup>

#### References:

1. Kasaven LS. Guillain-Barre syndrome in pregnancy. Eur J Obstet Gynecol 2018.
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## 5992

### Risk factors associated with difficult epidural placement: a retrospective study

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**Background and Goal of Study:** Neuroaxial block is used by anaesthesiologists to provide labour analgesia. Multiple attempts at needle placement are associated with patient dissatisfaction, higher incidence of spinal haematoma, postdural puncture headache and trauma to neural structures. We designed this retrospective study to determine if there is any patient or technique factors that could be associated with difficult epidural placement (DEP). DEP is defined as more than one attempt to identify the epidural space.

**Materials and Methods:** 10970 patients were included in the study, consisting of

all pregnant women submitted to epidural block, in a tertiary hospital, from January 2013 to December 2017. 6080 of those patients were excluded due to missing data. From the final 4890 enrolled population, we collected age, body mass index (BMI), gestational age, gravidity, cervix dilation and attended/missed labour analgesia appointment status. Regarding the technique, we studied the patient position during the procedure (lateral decubitus vs sitting), the spinal level (L2-L3, L3-L4, or L4-L5), the loss of resistance approach (with saline or air), the performer's experience (resident/consultant physician) and time of the day the technique was performed (morning vs afternoon/night shift).

**Results and Discussion:** The characteristics that we found to be independent risk factors for DEP were BMI (odds ratio (OR) of 1.06), gestational age (OR 0.968), sitting position of the pregnant woman (OR 0.776), and L2-L3 level of puncture (OR 2.498). A higher patient's BMI was found to be associated with multiple epidural punctures to accomplish success. On the other hand, the advanced gestational age correlates with less epidural attempts. Interestingly, an upper level of epidural puncture (L2-L3) and pregnant lateral position during the technique were found to be association with DEP. It is important to note that analgesia records of the technique usually describe the successful last attempt. Therefore, interpreting these results accordingly, they suggest that the last attempt is performed in L2-L3 rather than lower spaces. Regarding the position, we don't have data to inform us if the position was altered during the attempts.

**Conclusion:** In our population, higher BMI and lower gestational age are independent risk factors for DEP. Further study need to be done in order to confirm L2-L3 puncture and lateral position during the technique as risk factors.

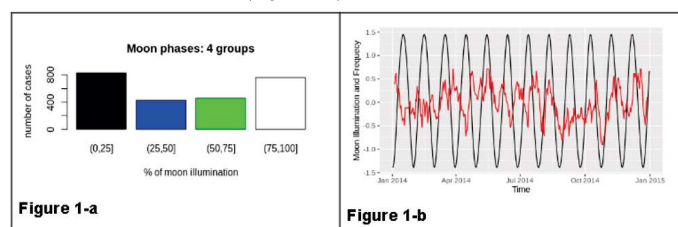
## 5851

### Does lunar phases influence number of births per day? A time series analysis

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**Background and Goal of Study:** Contradictory results regarding the influence of lunar phases have been found concerning the time of births. In general, the influence of the lunar cycle on deliveries is considered as a not evidence based myth. A Fourier Transform (FT) can show us what the frequencies of the seasonal components of our data are. In a retrospective study of 2480 births throughout 2014, we performed a time series analysis of the number of births per day, aiming to find out any lunar phase influence. This are preliminary results of a broader study gathering data over a decade.

**Materials and Methods:** We created a fully anonymized database registering number of births for each day of 2014 at our hospital. We used our latitude (-34.60) and longitude (-58.42) along with OCE (Analysis of Oceanographic Data) package for R commander utility, to obtain percentage of moon illumination for each day. We used the augmented Dickey-Fuller (ADF) test, which tests the null hypothesis that the series is non-stationary. For a visual exploratory analysis we formed four groups according to percentage range of lunar illumination (0 to 25%, >25% to 50%, >50% to 75%, >75% to 100%). We used decomposing methods in order to remove seasonal trends in our data. FT was applied to our data, so we were able to further decompose our dataset, eliminating the seasonal component of the frequency we've found. Then we plotted overlapped births per day series with moon illumination sinusoidal wave (Figure 1-b).



**Results and Discussion:** ADF test ( $p$ -value: 0.01) confirmed our data to be stationary (read: steady over time). A visual exploratory analysis suggested that number of births was approximately two fold higher at 0%-25% and 75%-100% moon illumination groups than the others (Figure 1-a). FT showed a relevant seasonal frequency at 3.5 days.

**Conclusion:** Lunar phases might have a relationship with the number of births per day at a maternity ward. Time series analysis methods might be further explored on this matter.