

Balancing Benefits and Risks of Indomethacin in the Management of Antenatal Bartter Syndrome: A Case Report

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Background

- Bartter syndrome, a very rare inherited renal tubular disorder, characterized by urinary salt wastage, hypokalemia, polyuria, and metabolic alkalosis may manifest antenatally as severe isolated progressive polyhydramnios.
- Indomethacin is known to reduce salt wastage and subsequent polyhydramnios during pregnancy; however, it reduces the Ductus Arteriosus diameter.

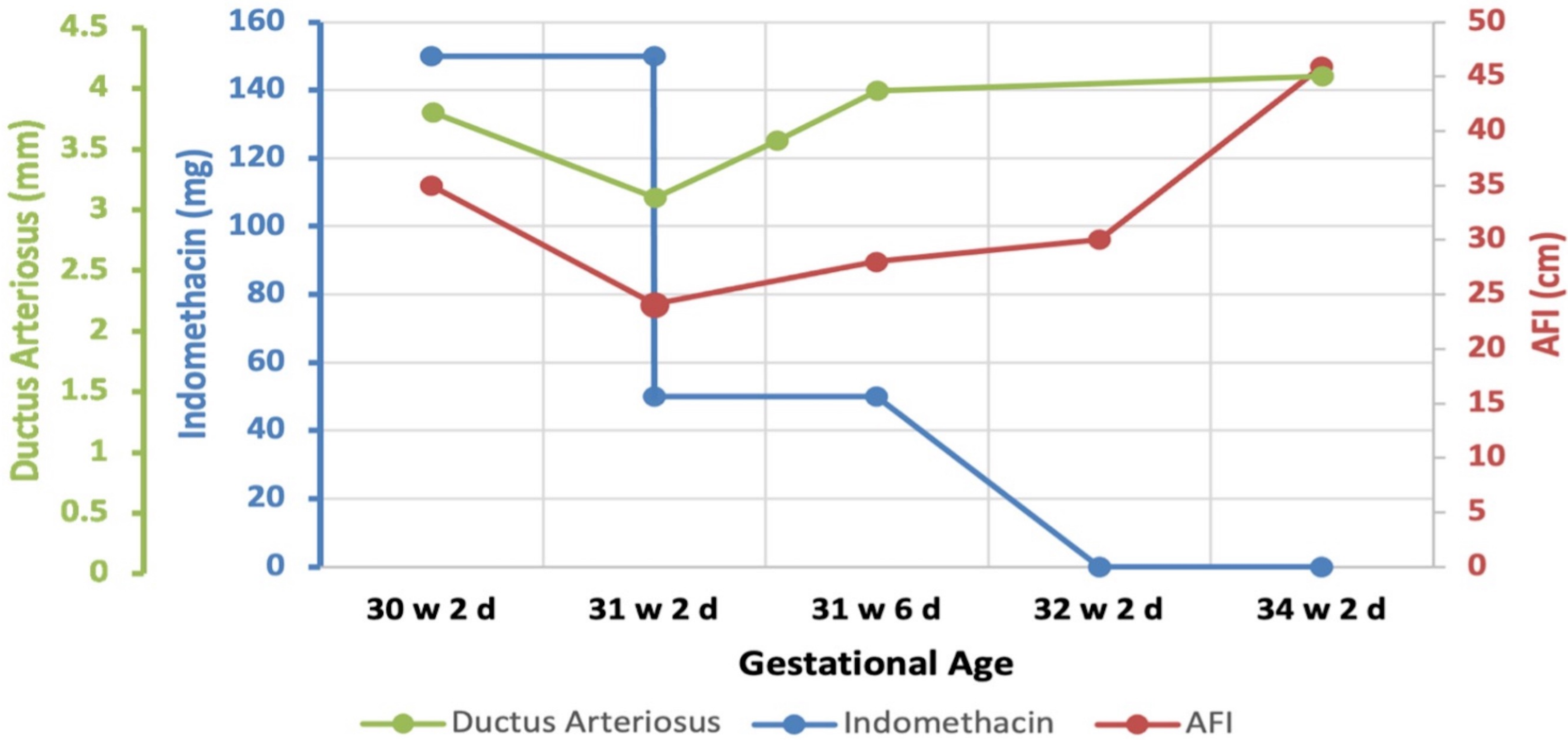


Figure 3: Indomethacin dose adjustments and response to treatment in terms of amniotic fluid index (AFI) and Ductus Arteriosus (DA) diameter

Discussion and Conclusion

- Antenatal Bartter syndrome should be suspected in case of severe isolated polyhydramnios.
- Umbilical artery doppler appears to be an important marker for the severity of polyhydramnios that should be monitored to time the termination of pregnancy, in addition to the already known Ductus Arteriosus and amniotic fluid index monitoring.
- Amniotic fluid index, Ductus Arteriosus diameter, and umbilical artery doppler work together as key indicators to guide the success and safety of the therapy.

Case

- A 36-year-old multigravida presented with severe isolated polyhydramnios at 30 weeks of gestation.
- Based on a history of a previous pregnancy affected with Bartter syndrome, indomethacin was initiated.
- Amniotic fluid volume, Ductus Arteriosus diameter, and umbilical artery pulsatility index were monitored by serial ultrasound scans.
- As evidence lacks on the optimal dose and duration of indomethacin, multiple-dose adjustments were made to reduce the amniotic fluid volume while maintaining normal Ductus Arteriosus diameter.
- A Cesarean section was performed at 34+ weeks of gestation due to progressive polyhydramnios, with an increased umbilical artery pulsatility index, which resulted in a healthy fetus diagnosed with Bartter syndrome postnatally.

Acknowledgement

We would like to thank the patient for their cooperation and consent.

Figure 1: An ultrasound scan showing (A): Severe polyhydramnios at 34 weeks of gestation (B): Ductus Arteriosus reduced on Indomethacin (C): Increased UA pulsatility index after stopping Indomethacin.

