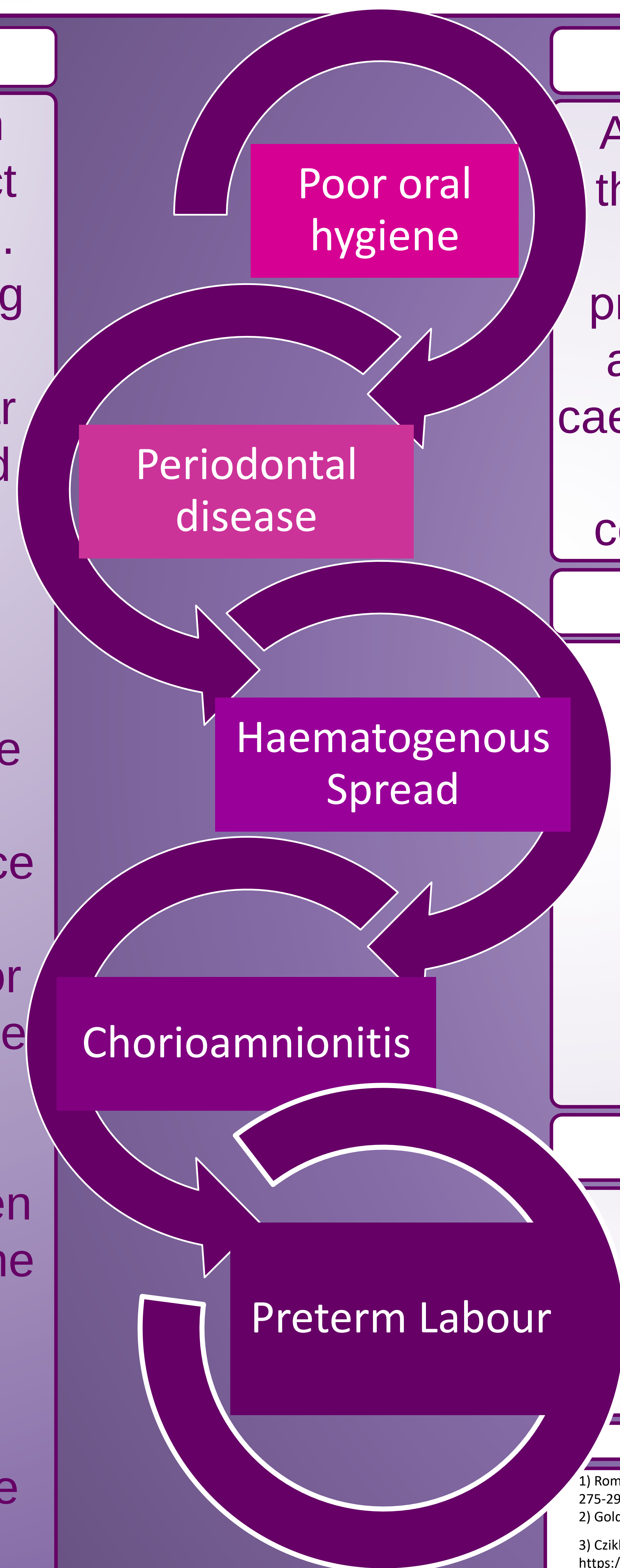




Objectives

Maternal oral health can negatively affect pregnancy outcome.

- ❖ Clinicians working in obstetrics should be familiar with the risks and diagnosis of periodontal disease.
- ❖ Clinicians should be able to provide women with appropriate advice and information and refer them for urgent dental care
- ❖ Early pregnancy is an opportunity to educate women about oral hygiene and ensure they are aware of the free NHS dental services available to them.



Case Report

A 37-year-old, G6 P5 presented to the maternity assessment centre (MAC) at 33 weeks and 2 days gestation with threatened preterm labour. She had four previous caesarean sections and had a raised BMI of 44. She was poorly engaged with antenatal care. She attended with tightening's and examination revealed evidence of premature prolonged rupture of membranes. Her MEOW'S score was 0 on admission. She was transferred to the labour ward and blood tests demonstrated evidence of infection. She had an abnormal antenatal CTG and had an emergency caesarean section. During the surgery there was clinical evidence of chorioamnionitis with extensive exudate pus was found lining the uterine cavity. The culture of this swab demonstrated Streptococcus Oralis, which is a normal component of oropharyngeal biome. This patient had very poor dentition, but this was not noted until after delivery.

Discussion

Periodontal disease has been shown to be a risk factor in adverse pregnancy outcomes. One of which is preterm labour associated with infection. The case presented here could be plausibly explained by the haematogenous spread of Streptococcus Oralis from periodontal disease to the placenta. Pregnancy causes physiological change to all body ...systems, including the oral cavity. In fact, pregnancy gingivitis was shown to affect up to 100% of pregnant women. Plaque causes inflammation of the gums and leads to gingivitis; pregnancy enhances the inflammatory response due to hormonal change; this is termed pregnancy gingivitis. For periodontal disease to develop, opportunistic bacteria (Streptococcus oralis in this case) often invade the plaque and colonise the oropharynx, causing a local and systemic immune response.

Conclusion

Oral hygiene is one of the strongest predictors of gum disease and adult periodontal disease has been shown to be present in 40% of women at reproductive age. Therefore, in women presenting with threatened preterm labour it is important to consider a history of periodontal disease or recent dental procedure as a potential cause chorioamnionitis.

References

- 1) Romero R, et al. Clinical chorioamnionitis at term X: microbiology, clinical signs, placental pathology, and neonatal bacteremia – implications for clinical care. *Journal of Perinatal Medicine*. 2021;49(3): 275-298. <https://doi.org/10.1515/jpm-2020-0297>
- 2) Goldenberg RL, Culhane JF, Iams JD, Romero R. Epidemiology and causes of preterm birth. *Lancet*. 2008; 371(9606):75-84. <https://www.sciencedirect.com/science/article/pii/S0140673608600744>
- 3) Czik MJ, McCarthy FP, Murphy KE. Chorioamnionitis: from pathogenesis to treatment. *Journal of Clinical Microbiology and Infection*. 2011; 17(9):1304-1311. <https://www.sciencedirect.com/science/article/pii/S1198743X14612088#bib13>
- 4) Monif GRG, Baker DA (editors). *Infectious Diseases in Obstetrics and Gynaecology*. 5th ed. London: Parthenon. 2004. p 355–69
- 5) NICE Guideline – Preterm labour and birth. 2015
- 6) AJ Thompson on behalf of the Royal college of Obstetricians and Gynaecologists. Care of Women Presenting with Suspected Preterm Prelabour Rupture of Membranes from 24⁺⁰ Weeks of Gestation. Green-top Guideline No.73. 2019. <https://obgyn.onlinelibrary.wiley.com/doi/10.1111/1471-0528.15803>