

# Antibiotic Prophylaxis in Ragged Placental Membranes: A Prospective, Multicentre, Randomized Trial

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## ABSTRACT

**Background:** Ragged placental membranes is not uncommonly reported in midwifery texts and is a distinct entity from the more conspicuous retained placenta. Although the incidence of postpartum endometritis is merely 1-5% after vaginal births, it remains the most common source of puerperal sepsis, contributing up to 1 in 6 cases of maternal mortality in developing countries. Some geographically-removed centres in the country prophylactically administer antibiotics for women with ragged placental membranes after vaginal birth, extrapolating evidence from retained placenta and operative vaginal deliveries. We sought to clarify the rationale of continuation of such practices. **Methods:** This was an open-label, prospective, multicentre, randomized quasi-experimental study. Three hospitals where the current protocol was to administer prophylactic amoxicillin-clavulanic acid served as the sites of recruitment. Women who delivered vaginally beyond 24<sup>th</sup> weeks of gestation with ragged or retained placenta were invited to participate in the study and randomized into prophylaxis or expectant management by blocks of 10, at a 1:1 ratio. A medication adherence diary was provided and patient followed up at 2 weeks and 6 weeks postpartum. **Results:** 6569 vaginal deliveries were conducted across three centres during the study period, of which 10.9% had ragged membranes. The incidence of endometritis was not significantly raised in women without prophylaxis (0.29% vs 0.90%;  $p=0.60$ ). All cases of endometritis occurred within the first 2 weeks and antibiotic prophylaxis did not ameliorate the severity of endometritis since rates of ICU admission, surgical evacuation and transfusion were comparable. **Conclusion:** Prophylactic use of antibiotics after vaginal delivery in women with ragged placental membranes did not result in a reduction of endometritis. Educating women on the signs and symptoms of endometritis would suffice. Based on the reported incidence of ragged membranes, a change in practice would result in 1,500 less prescriptions of antibiotics per annum in these three centres.

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# Case Report: On-going Pregnancy following Frozen Embryo Transfer of a Day-7 Euploid Blastocyst

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## ABSTRACT

**Objectives:** This case report describes a successful on-going pregnancy following frozen embryo transfer (FET) of a Day 7 euploid blastocyst. **Case Presentation:** The patient, aged 40 years, who presented with AMA underwent IVF treatment with preimplantation genetic screening (PGS) at Alpha Fertility Centre in October 2017. Following oocyte retrieval, her oocytes were inseminated using PIEZO-ICSI. Morphological assessment was done on Day 3, Day 5, Day 6 and Day 7. To qualify for PGS and cryopreservation, embryos on Day 5 and Day 6 had to be at least 3BB or better using Gardner's Grading system. On Day 7, embryos had to be 4BB or better to qualify. Biopsied cells were analysed using Next Generation Sequencing (Life Technologies, USA). Vitriification was done shortly after biopsy using Cryotec Method (Cryotech, Japan). Fifteen oocytes were retrieved, of which 8 had PIEZO-ICSI. From these, 5 were normally fertilized. No blastocyst was suitable for biopsy on Day 5 and/or Day 6. There was 1 blastocyst suitable for biopsy on Day 7. Euploidy was confirmed on the Day 7 biopsied blastocyst. The patient was prepared for FET on a 6.5-days endometrium. The Day 7 euploid blastocyst survived post-thawed, was morphologically intact, and transferred; resulting in a singleton pregnancy. At the time of writing, the patient is in her 16th week of pregnancy. **Discussion and Conclusions:** Euploid blastocyst cryopreserved on Day 7 has the potential to implant and achieves pregnancy. Potentially slow growing blastocysts on Day 6 should not be discarded but should be observed for one more day.