

## Placentophagy in Andaman Local Pig-First Case Report

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### Abstract

Placentophagy is observed as a ubiquitous behaviour in almost all placental animals. An Andaman local pig aged 2 years had shown this behaviour after farrowing. The remaining parts of placenta was removed when it get noticed and disposed-off properly. Placentophagy behaviour by Andaman local pigs as in present case report has not been reported earlier.

**Keywords:** Post-partum, placentophagia, placentophagy, Andaman local pig, sow,

### Introduction

Placentophagy is defined as the act of consuming part or whole of the afterbirth or placenta following parturition in mammals (Hayes 2016). It is observed in many placental animals including swine. The reason of placentophagy is not known, however, four main theories have been proposed such as bonding, predator avoidance, hunger and instinct. It also prevents the mother from choking and/or promotes cleanliness and sanitation in the birthing area. Farrowing involves delivery of the piglets and the expulsion of placenta. The placenta is an important temporary organ that develops between mother and young one during pregnancy in the maternal uterus to support the fetal development. Placentophagy was reported in different species of animals, not only in pigs, but it was also reported in cattle, horse, sheep, except in humans, aquatic species and camels (Young and Benyshek, 2010; Kristal et al., 2012). Most sows will give attention to their piglets after consuming their placenta. In case, placenta is removed, the sow returns her attention to piglets. Present communication describes about the case report of placentophagy in Andaman local pigs.

### Case history and presentation

An Andaman local sow aged 2 years was observed to eat her own placenta after 1-2 hours of farrowing. History revealed that the farrowing was normal with 6 piglets, sow was late attended and the placenta was eaten by dam. Half

of the placenta was consumed by the time it was noticed. The remaining parts of placenta was removed immediately and disposed-off properly. Body temperature, pulse and respiration rate were observed within the range. It is advised to attend sow after farrowing along with feeding the pig with good balanced diet enriched with vitamin and mineral supplements (Figure 1 and Figure 2).



**Fig 1: Andaman Local pig with piglets and placenta**



**Fig 2: Placentophagy behaviour in Andaman Local pig**

## Discussion

There are various aetiologies proposed behind placentophagy in mammals. The smell of amniotic and allantoic fluid as well as fresh blood during delivery attract predators towards sow and piglets. These predators prefer to prey on new born piglets and also attack on dam. Therefore, the dam is eating her placenta to get rid of the evidence and sweet smell of her new born piglets, thus it may protect them from predators. Delivery is a laborious process which needs more energy to expel out the fetus and fetal membrane. Not only that, the mother loses a lot of blood and fluid around parturition. It was reported that eating the placenta can help dam to reduce postpartum depression, improve lactation and increase energy (Selander, 2015). The placenta contains a variety of nutrients such as fiber, protein, potassium and hormones including estradiol and testosterone. Therefore, the sow needs to re-establish those nutrients lost in the parturition process besides that the placenta is contained good nutrients for the dam. It also contains calcium, iron, proteins, B complex vitamins and hormones for the sow. These higher nutrients and hormones will help the sow to recover internally (Apari and Rozsa, 2006; Beacock, 2012). Placenta consumption has increased energy, improved lactation, postpartum depression, increased iron stores, decreased postpartum vaginal bleeding and quicker uterine involution in human studies (Selander, 2015b). However, the sow survives well without eating it and no detrimental effects associated with disallowing placentophagy in pigs.

Research in other species like rats and cows has indicated that mothers which consumed placenta and amniotic fluid had higher natural opioid substances (e.g. endorphin and dynorphin) concentration than in the mothers which were disallowed to eat placentas (Kristal, 1991). Concentration of these endogenous opioids is significantly increased in mothers that ate placenta, which indicates that their pain level was dramatically increased during farrowing. Therefore, eating placenta has been proven to reduce pain during uterine contractions and its shrinkage for hours after birth (Kristal et al., 2012).

Placentophagy increases blood oxytocin level because placenta contains oxytocin which in turn stimulates the contraction of smooth muscles around the mammary glands that leads to increased milk letdown and release of milk. It is very important and interesting that placentophagy increases instinct bond between mother and young ones. In canine species, reported that the mother has rejected puppies when they were washed or placenta was removed from puppies for 36 hours, whereas the same puppies were accepted immediately when placenta was artificially applied. This study clearly indicates that fetal membrane play significant role in bonding between mother and young one (Abitbol, 1991).

Recent studies have shown that there is no health benefit of eating the placenta. Instead, it carries risks for both the mother and her suckling young ones. At the same time, eating of more volume of placentas leads to loose stools and, choke leads to death. In human study, it has been reported that placenta consumption could even be harmful not only for the mother, but for the young one too. It was also noted that consumption of placenta leads to spread of diseases to mother and young one. These risks include viral and bacterial infections for both the suckling young one and the mother besides the risks of ingesting toxins and hormones that accumulated in the placenta during pregnancy. It increases risk for thromboembolic events, exposure to environmental toxins that may accumulate in placental tissue and expose them to infectious agents (Young et al., 2012). The placenta is a major source of estrogen during pregnancy and exogenous estrogen administration is contraindicated in the immediate postpartum period because of the increased risk of a thromboembolic event (Centers for Disease Control and Prevention, 2010). In addition, estrogen is known to antagonize prolactin via suppression of hypothalamus which may decrease milk production (Hatcher et al., 2011). In addition to possible risks related to bioactive hormones, harmful substances including cadmium, lead and mercury have been accumulated in the placenta (Al-Saleha et al., 2011; Esteban-Vasallo et al., 2012) which can cause health hazards.

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