Abstract

Females of Old World monkeys and apes (*Catarrhini*) exhibit a menstrual cycle, during which changes in skin colouration and/or sexual swellings can be observed in some species, located mainly in the anogenital region and around the ischial callosities, but also on the chest, abdomen or face. These morphological changes can be compared with changing hormone levels and also the way males respond to them, which is reflected in the degree of visual attractiveness. The odour of females may also be attractive to males, and with changes in the odour over the cycle, males could assess the reproductive status of females based on olfactory inspection. Males may also assess female readiness to mate through behavioural changes, which include various proceptive displays such as different gestures, facial expressions, vocalizations and the presentation of morphological changes, among others. The aim of this thesis is to summarize and critically review the available literature dealing with morphological and behavioural changes during the menstrual cycle in females of Old World monkeys and apes. Several hypotheses have been proposed to explain the possible function of these cyclical changes, such as those related to male competition, increased paternal care and reduced risk of infanticide. Furthermore, hypotheses dealing with the honest signal of female fertility and quality and the hypothesis of a graded signal of probable ovulation. Based on the current evidence, there is the greatest support for the graded signal hypothesis.

Keywords: menstrual cycle, catarrhine primates, sexual swellings, attractiveness, proceptivity, receptivity, advertised fertility, honest signal, graded signal