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Indigenous medicine use for sex selection during pregnancy and risk of congenital malformations and stillbirths

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Gender preference is an integral part of society even today in India. The innate desire to have at least one son have forced people to resort to sex selection techniques - be it traditional or modern. Among various practices is a practice of intake of sex selection drugs (SSDs) reported to be taken by pregnant women during initial months of pregnancy to beget a male child. SSDs are indigenous preparations that contain certain herbal and non-herbal ingredients and are not sold over-the-counter. Stringent rituals are supposed to be followed for its success. A preliminary small community based study indicated that 46% of the women gave a history of intake of SSDs. Risk to the fetus might be involved as these are consumed at a time when sexual differentiation takes place at 6-10 weeks of pregnancy. Population based case control studies were conducted in Haryana, a state in India with skewed sex ratio. The study with structural birth defects as the outcome shows that the risk of birth defects with the intake of such medicines increase by 3 times. (Adjusted Odds Ratio 3; 95% CI 1.7, 5.6). The likelihood increases further in the absence of sons in the previous pregnancies (Adjusted OR 3.4; 95% CI 1.7, 6.9). Another study that aimed to look at the association with stillbirths showed that the risk increase by 2.5 times (Adjusted OR 2.6; 95% CI 1.5-4.5). The study concluded that for every 5 women who took SSDs one woman had stillbirth. Preliminary analyses of 30 SSDs indicate that these contain phytoestrogens and testosterone. 63% drugs contained phytoestrogens (genistein, daidzein, formononetin). The average dose of daidzein was 14.1 mg/g, genistein 8.6 mg/g and formononetin 5 mg/g of sample, which is above the normal acceptable dosage. The dosage along with the timing (first trimester of pregnancy when the fetus is growing actively) are crucial factors that may give rise to myriad of complications, both immediate and late.

Biography

Sutapa Bandyopadhyay Neogi is a Public Health Specialist actively engaged in Research and Teaching at Indian Institute of Public Health-Delhi, Public Health Foundation of India (PHFI) as an Additional Professor. An MBBS from Nil Ratan Sircar Medical College, Calcutta and MD in Community Medicine from Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh, and Diplomat of National Board (DNB) in Maternal and Child Health, she has excellent academic credentials. She has a rich experience in public health, starting a career as a Resident followed by Consultancy for UNICEF and currently a Faculty at IIPHD. She is a part of the research team for projects supported by Government of India and developmental partners. She is a Reviewer of many national and international journals.

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