

CONGENITAL HYPOPLASIA OF VULVA AND VAGINAL VESTIBULE IN PIGS.

R.H.G. NOGUEIRA*; M.A.G. CHQUILOFF; J.C.P. SILVA and E.F. NASCIMENTO
 VETERINARY SCHOOL, FEDERAL UNIVERSITY OF MINAS GERAIS, BRAZIL BOX 567

The congenital defects in domestic animals constitute a group of pathologic entities with a broad anatomic, functional and causal spectrum. Nevertheless, the predominant trend is to consider these defects as occasional occurrences, without other involvements except the eventual loss of some individuals. As far as swine is concerned, no less than 148 alterations of this kind, regarding all the organic systems, eyes and chromosomic constitution were presented in recent review (Huston et al., 1978). The congenital malformation, which is the subject of this report, i.e., an hypoplasia of both vulva and vaginal vestibule, contrarily to what commonly occurs, was characterized by a significant clinical expressivity and a numerous emergence in a short period of time. According to Nieberle and Cohrs (1970), Roberts (1971), Johansson and Rendel (1972), and Smith et al. (1974), the vulval and vaginal hypoplasia is a partial manifestation of hypoplastic female genitalia, as frequently spotted in intersexes. Jubb and Kennedy (1970) without any reference to etiology, say that hypoplasia can affect either vulva or vagina, separately, but they do not register the species in which this alteration was detected. Hull et al. (1940) described the presence of infantile vulva in bovine, and Leopold and Saperstein (1975) the vaginal stenosis associated to ano-rectal stenosis, also in bovine. In connection with swine, Thomke (1967) reported a case of vulval hypoplasia thoroughly, and Hanser-Melander (1972) related a similar case regarding a Landrace sow with normal karyotype. Thus, we can infer that the present paper register a congenital defect in swine not yet reported.

Twelve out of 22 cases of congenital anomalies detected were related with vulval hypoplasia. The boars (5) and the sows (6) did not show any phenotypic abnormality on visual examination. The vulva of the affected gilts presented a small opening, with a reduced diameter, and the urine was eliminated through a jet shot across some distance, with great difficulty. The morphoclinical significance of this abnormality was invariable. The post mortem examination of one of those gilts corroborated the definitive diagnosis of vulvovaginal hypoplasia, since the vulval anomaly was associated with an exactly alike defect in vaginal vestibule. The other parts of genitalia as well as the pair of gonads, were perfectly structured. Afterwards, through the farmer's files, it was remarked that the affected gilts, which belonged to seven litters, descended from two Landrace boars directly. Based upon the origin of the reproducers, the racial constitution of the swine herd, and the results obtained with the prophylaxis measures, the most acceptable etiologic hypothesis is heredity. The genetic agent could be a mutant autosomal recessive gene, sex limited, and with complete penetrance. The prophylaxis used consisted in sending the genetically infected animals (two boars and seven sows) to slaughter. Their respective descendants were kept for fattening and posterior slaughtering. These preventive measures had the desired result: the animals were followed-up for three years and no defect could be detected. In the literature that was consulted, no description of congenital

hypoplasia comprising both vulva and vaginal vestibule in sows was found, except for some cases of intersexuality, usually accompanied by more severe genital malformations. As far as the form merely vulval of the abnormality is concerned, although uncommon, it was possible to obtain some information about its occurrence in swine. Thomke (1967) reported this alteration in a gilt, suggesting genetic etiology, since the same fact was observed in a complete sister and in a half-sister of the above mentioned gilt. Unfortunately, the suspected boar was slaughtered before the hypothesis of genetic etiology could be raised, and consequently the crossbreeding tests could not be performed. In the present study, it was not possible to test both reproducers responsible for the outbreak of the cited defect, either. Another occurrence of vulval hypoplasia in sow was related by Hanser-Melander and Melander (1972). It concerned with a Landrace animal, whose vulva had a narrow diameter (2-3 mm) and the urethral meatus - besides an underdeveloped clitoris - was localized at one site of the vaginal vestibule. From this segment on, no defect could be detected in the genitalia, and the karyotypic analysis showed a normal female with 38,XX chromosomes. Hull et al. (1940) described this defect regarding 8 descendants of a Jersey bull, which were as a last resort submitted to surgery on the occasion of parturition. Leopold and Saperstein (1975), detected in three Jersey herds the existence of 14 cows with vaginal stenosis associated to ano-rectal stenosis. Paternal lines of all affected cows were traced to a common ancestor and these animals had very serious difficulties on the occasion of parturition. These authors, based on pedigree, suspected the presence of a recessive gene, with low frequency, inducing manifestation of the anomaly. Thus being, although completely prejudicial to the species under natural conditions, the vulval hypoplasia in cow does not impair fertility.

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