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Abstract

This report documents experimental reproduction of tetramelic arthrogryposis in purebred Yorkshire swine by breeding trials. Data from the trials indigated arthrogryposis may be due to homozygosity of a simple autosomal recessive gene. No affected pig was observed to be alive at parturition, although most had been alive in utero just prior to delivery. Other than dystocia observed in the sows, no other significant clinical findings were noted. The condition was noted in five litters from two sows which were bred to the same boar. Approximately 25% of the pigs exhibited the clinical signs of arthrogryposis which included malformed rigidly extended legs.; Swine Day, Manhattan, KS, November 9, 1978

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Arthrogryposis in Piglets

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This report documents experimental reproduction of tetramelic arthrogryposis in purebred Yorkshire swine by breeding trials. Data from the trials indicated arthrogryposis may be due to homozygosity of a simple autosomal recessive gene.

No affected pig was observed to be alive at parturition, although most had been alive in utero just prior to delivery. Other than dystocia observed in the sows, no other significant clinical findings were noted. The condition was noted in five litters from two sows which were bred to the same boar. Approximately 25% of the pigs exhibited the clinical signs of arthrogryposis which included malformed rigidly extended legs.

Gross pathological findings were tetramelic arthrogryposis of all joint articulations and kyphosis of the thoracic vertebra. In those cases, severing the overlying tendons and muscles would result in normal joint movement. The articular surfaces of the affected joints appeared flattened and lacked normal remodelling of the cartilaginous surfaces. The subcutaneous fascia and skeletal muscles were edematous and lacked fascial tissue separating muscle tissue into individual bundles. An occasional dislocated flexor involving the hindlegs was noted. The skeletal muscle was hypoplastic in the affected limbs. Examining other body organs revealed no gross abnormalities.

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