



NTP Nonneoplastic Lesion Atlas

Epididymis – Sperm Granuloma



Figure Legend: Figure 1 Epididymis - Sperm Granuloma. Giant cells are present in the sperm granuloma (arrows) in a male B6C3F1 mouse from a chronic study. **Figure 2** Epididymis - Sperm Granuloma. Higher magnification of Figure 1 showing the granulomatous inflammation and presence of giant cells (arrow) in a male B6C3F1 mouse from a chronic study. **Figure 3** Epididymis - Sperm Granuloma. A discrete sperm granuloma is present (asterisk) in a male F344/N rat from a subchronic study. **Figure 4** Epididymis - Sperm Granuloma. Higher magnification of Figure 5 showing the granulomatous reaction in the lumen of the affected duct in a male F344/N rat from a subchronic study.

Comment: Sperm granulomas occur when sperm is released into the interstitium through a rupture in the epithelial lining or when inflammatory cells gain access to the sperm within the ductular lumen. If there is rupture into the interstitium, the epididymal lining may repair itself and maintain sperm





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continuity through the epididymal duct. Sperm granulomas are most commonly seen in the cauda epididymis but can occur throughout the epididymis, as well as the efferent ducts. If they occur in the efferent ducts and obstruct the outflow of sperm and fluid from the testis, they will result in secondary tubular dilation and/or atrophy in the associated testis due to the accumulated backpressure upstream. The lesion is characterized by a central accumulation of sperm surrounded by a granulomatous foreign body inflammatory response, which generally contains numerous multinucleated giant cells (arrows, Figure 1 and Figure 2) (Also see Epididymis - Inflammation). Sperm granulomas occur as an incidental background finding in any age of rodent but can also be chemically induced.

Recommendation: Sperm granulomas should be diagnosed and graded and should be discussed in the pathology narrative if the incidence and/or severity appears to be related to chemical administration. Bilateral involvement should be recorded when present, and a modifier can be used to record location within the epididymis if appropriate. Associated lesions in the epididymides should not be diagnosed separately unless warranted by severity. Associated lesions in the testes may be diagnosed separately and their association to the sperm granuloma noted in the narrative.

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