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JOURNAL ARTICLE

Reversible harmless interruption of testicular blood supply in the ram

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An effective method of interrupting testicular blood flow temporarily and repeatedly in the ram has been developed. Blockade of flow has been achieved mechanically by an inflatable occluder placed around the testicular artery at the level of the spermatic cord. The effect of the blockade on total testicular blood supply was investigated using Doppler flowmetry and a percutaneous Xenon-133 injection method. With both approaches, the blood flow changes after inflation or deflation of the occluders could be estimated satisfactorily. A substantial decrease of testicular blood flow was achieved in eight of the 10 testes with inflated occluders. However, there were indications that in the remaining two testes blockade of the arterial flow was not complete. After deflation of the occluders, blood flow was restored rapidly and completely in all testes. Macro- and microscopic examinations revealed no long-term damage to the testis after blood flow interruptions lasting 30 or 60 minutes.