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Reaction of the urinary bladder in rabbit anaphylaxis.

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On intravenous injection of specific foreign protein into hypersensitive guinea pigs, there is a sharp and very marked contraction of the urinary bladder, usually sufficient to increase the intracystine pressure about 40 mm. Hg. Relaxation usually sets in about the third minute, but in fatal anaphylaxis the intracystic pressure rarely falls below 20 mm. Hg. before the death of the animal. This marked, prolonged urinary bladder contraction is consistent with the generally accepted view that smooth muscle contractions play a dominant role in the anaphylactic syndrome in guinea pigs.

In contrast, on intravenous injection of specific foreign protein into hypersensitive rabbits (kymograph control), there is usually no demonstrable increase in the tone of the urinary bladder, even in rapidly fatal anaphylaxis leading to death of the animal in seven to ten minutes. In about a third of the rabbits, a slight contraction is recordable, usually sufficient to increase the intracystic pressure about 2 mm. Hg., with full relaxation in 4 to 7 minutes.

This negative result is inconsistent with the theory that smooth muscle contractions play an appreciable role in rabbit anaphylaxis.