formation (though 2 oxime isomers are formed). If oximation is omitted and the Me-TMS derivative is formed, two peaks are seen on GC analysis. The major peak has a retention time (C value = 24.3) and mass spectrum identical to 6(9)-oxy-11,15-dihydroxyprosta-7,13-dienoic acid (cyclic ether), as described by Pace-Asciak and Wolfe (1971) and derived from rat stomach homogenates. The second peak (C value = 25.7) is probably the open chain form $PGF_{1\alpha}$ during derivitization and gas chromatography and that it is not present in the original extracts. The biosynthetic route from arachidonic acid to 6-oxo-$F_{1\alpha}$ in the uterus is under investigation.

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The potentiation of exogenous noradrenaline by prostaglandins $F_{2\alpha}$ C_2 and D_2 on the canine saphenous vein

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Kadowitz, Sweet & Brody (1971) have shown that prostaglandin $F_{2\alpha}$ ($PGF_{2\alpha}$) potentiates the response of venous smooth muscle to exogenous noradrenaline (NA). PGD_2 acts similarly to $PGF_{2\alpha}$ on several preparations (Horton & Jones, 1974) whilst PGC_2 has similar actions to PGE_2 (Jones, Kane & Ungar, 1974). Experiments are reported here which compare the potencies of $PGF_{2\alpha}$, PGD_2 and PGC_2 on a single preparation.

The method used was a modification of that described by Webb-Peploe & Shepherd (1968) and was used to determine the venous response to exogenous NA before and during infusion of the various PGs. Both lateral saphenous veins were cannulated at the ankle and perfused separately, one serving as a control for the other. NA was injected proximal to the pump and once a dose dependent relationship was obtained, the PG infusion was commenced.

$PGF_{2\alpha}$ (1 μg/min) caused a significant potentiation of the response and the calculated potency ratio (R) from the pooled results of three preparations was 6. PGD_2 (1 μg/min) was not as potent (R = 3, from six preparations) and PGC_2 (1 μg/min) was the least potent (R = 2, from three preparations). Using linear regression analysis, the results during PG infusion (1 μg/min) were significantly different from control ($P < 0.05$). In the two preparations, $PGF_{2\alpha}$ (0.1 μg/min) was found to potentiate the response (R = 2). However, at 5 μg/min there were considerable baseline changes and no satisfactory tests were performed. At 5 μg/min PGC_2 caused similar baseline changes. Up to 10 μg/min, PGD_2 was apparently no more potent than at 1 μg/min and no baseline shift occurred.

The results with $PGF_{2\alpha}$ are largely in agreement with those of Kadowitz *et al.* (1971) and a similar potency ratio for $PGF_{2\alpha}$ (1 μg/min) has been obtained. We have found PGD_2 to be considerably less potent than $PGF_{2\alpha}$, whereas it is up to 60 times more potent than $PGF_{2\alpha}$ as a direct vasoconstrictor in the sheep (Jones, 1975). PGC_2 which from our results is only weakly active in potentiating the effects of NA, is in contrast a potent dilator of both resistance and capacitance vessels in the dog (Jones, Kane & Ungar, 1974).

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