

# Subcellular distribution of prostaglandin-E<sub>2</sub> and prostaglandin-F<sub>2</sub> in atrial tissue from patients with mitral valve disease

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The distribution of prostaglandin-E<sub>2</sub> (PGE<sub>2</sub>) and prostaglandin-F<sub>2</sub> (PGF<sub>2</sub>) was studied in subcellular fractions isolated from homogenates of human atrial fresh tissue by differential centrifugation. Right and left atrial samples were excised from the same heart of six patients with mitral valve disease at the time of open heart surgery. The atrial fractions investigated were mitochondrial (8500 g pellet), microsomal (100,000 g pellet) and cytosol soluble (100,000 g supernatant) fractions. After extraction of prostaglandins from the three atrial fractions and separation of PGE from PGF series by chromatography on silicic acid column, these prostaglandins were measured by radioimmunoassay. The results showed that PGE<sub>2</sub> and PGF<sub>2</sub> were located mainly in the soluble cytosolic fraction of right and left atrial tissue ( $p < 0.001$ ). Furthermore, the prostaglandins levels were higher in left than in right atria of these patients ( $p < 0.001$ ). The relation between prostaglandins heart generati