

**360 Cyclosporin A affects liver regeneration following partial hepatectomy**

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Taking into account CsA's importance in liver transplantation and the necessary recovery of hepatocytes damaged during cold preservation we have studied CsA's effects over hepatic regeneration.

**MATERIALS & METHODS.** 40 female Sprague-Dawley rats weighing 200-220 grs have been used. Liver regeneration has been induced by a partial hepatectomy (40%). CsA was administered intraperitoneally (20 mgr/Kgr) the day before and six hours prior to hepatectomy. By means of cytophotometric methods three parameters have been evaluated: Nuclear-DNA (Feulgen), hepatocyte-protein content (Naftol-Yellow), and S.D.H. activity and zonation (Sodium succinate and p-nitrobluetetrazolium).

**RESULTS.** CsA has induced DNA synthesis in livers from control animals. When administered prior to partial hepatectomy it has increased DNA-synthesis usually following hepatectomy.

In CsA-treated rats we have not observed any significative decrease in hepatocyte's protein content during DNA-synthesis, which contrasts with the decrease found when DNA-synthesis is induced by hepatectomy.

With regard to S.DH. zonation, CsA has decreased high activity zone (zone B) by 68.6% in normal rats, which is quite higher than the 38.4% decrease accounted by hepatectomy. Moreover, CsA administered simultaneously with hepatectomy induces a yet higher reduction of zone B (73.5%).

**CONCLUSION.** In our experience CsA has induced and enhanced liver regeneration. Different results obtained about protein content suggest that the mechanism by which CsA induces hepatocytic DNA-synthesis is different from that involved in liver regeneration following partial hepatectomy. With these results in sight, we think it could be assumed that the immune system plays a role in liver regeneration.