SUMMARY AND CONCLUSIONS

The present study was carried out to assess the role of captopril in CHF, both as an alternative to digoxin in cases of CHF in sinus rhythm, and also as an adjuvant in cases resistant to conventional decongestive therapy (digoxin and diuretics). The period of study extended from August, 1988 to July, 1989. A total of 64 patients were studied. These were assigned to three groups - A, B & C. Group A received conventional decongestive therapy, group B had all patients in sinus rhythm and the cases received captopril and diuretics for treatment of CHF. Digoxin was withheld in these cases. Group C received captopril and digoxin both in addition to diuretics. Most (82%) of these cases were refractory to therapy with digoxin and diuretics. All the cases were in NYHA Class III or IV. The average dose of captopril used was 31.25 mg/day (range 6.25 mg to 75 mg/day).

The therapeutic response was evaluated by recording various parameters, viz, increase in urine output, reduction in body weight, alteration in heart rate and blood pressure, decrease in JVP, liver size and heart size (on X-Ray Chest); and symptomatic improvement in effort tolerance, according to the NYHA grading. The response was seen both in the short term (within 4 weeks) and the long term (more than 4 weeks). The average duration of follow-up was 10 weeks.

Statistically significant improvements in urine
output (p < 0.001 all groups), reduction in heart rate (p < 0.025
for group A, p < 0.001 group B and p < 0.01 group C), decreases in
liver size (p < 0.005 group A, p < 0.001 groups A & B), and JVP
(p < 0.001 all groups) were observed. Blood pressure did not alter
significantly in any of the groups. Reduction in heart size
and of pulmonary venous congestion were observed in all the
three groups, the former being statistically significant
(p < 0.05) in group C only. Good response (improvement by 2 or
more NYHA grades) was seen in 70%, 50% and 68% of groups A,
B & C respectively, while, 30%, 45% and 27% of these were
showing fair (improvement by 1 NYHA grade) improvement. In the
long term, 63% cases of group A, 90% of group B and 72% of
group C were showing good improvement in effort tolerance,
while 32%, 10% and 22% of these groups respectively had improved
fairly. The patients of ischemic heart disease improved better
in group B as compared to the controls. Remarkable improvement
could be achieved in cases of predominant MR in the groups
added captopril. This led to the significant improvement seen
in refractory cases of CHF, 50% of which, were having predominant
MR.

In the groups receiving captopril, transitory
asymptomatic hypotension was observed in 4 cases as the only
side effect. A very low incidence of side effects could be due
to low doses of captopril employed in this study.

4 cases of group B were having severe CHF and
responded to therapy with captopril and diuretics. This was
noteworthy as captopril has so far been tried in mild to
moderate CHF.

The therapeutic responses achieved in our study highlight that captopril is as, or perhaps more effective, as compared to digoxin in cases of CHF in sinus rhythm. To further evaluate its effectiveness in controlling even advanced CHF in sinus rhythm, more studies should be conducted along these lines. Significant improvement can be expected when captopril is added in cases resistant to conventional decongestive therapy. Low doses of captopril are effective in CHF and the side effects observed with these doses are relatively very few and insignificant with respect to clinical benefit it can offer.

Our observations have been compared and discussed in light of available literature on the subject.