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# ANOTHER VIEW OF CAIRNS GONIOSPASIS

ROBERT C. DREWS, M.D.
JAMES C. BOBROW, M.D.
Clayton, Missouri

Cairns produced trabecular traction surgically by means of a suture stretched from limbus to limbus which engaged the iris in the anterior chamber, and found that this improved glaucoma control[1]. Recently Alpar found that suturing an iris coloboma seemed to produce better glaucoma control in a small series of patients[2]. And now Sherif and Dardenne have published a paper[3] in which they state that "phakoemulsification and lens implantation with sector iridectomy and postplaced sutures had beneficial effects on previously elevated intraocular pressure". It is well known that miotics do not improve the facility of outflow by opening the trabecular meshwork through iris traction produced by the myosis.

Stimulated by personal communication with Alpar, and not knowing of the —then unpublished— work of Sherif and Dardenne, we began to search our patient records for the past three years. Only patients who had a minimun follow-up of one year were accepted for this study. All patients in this study had chronic glaucoma, controlled with a variety of medications. All were subjected to extracapsular cataract extraction with implantation of a posterior chamber lens. All had a peripheral iridectomy completed with a radial iridotomy into the pupil to gain the necessary exposure for the capsulotomy, nucleus expression, and cortical cleanup. Having no preconceived ideas about ease of glaucoma control, some of these patients (chosen by whim) had the iris coloboma repaired by suturing.

We began by analyzing patients who had received iris sutures to repair the surgical coloboma. Several patients were found to answer our criteria, and the improvement in intraocular pressure control and the decrease in the necessary number of prescriptions to achieve this seemed so dramatic that we were very pleased, submitted the title of this paper of this conference, and began to think of

the prospective use of straight needle technique to accomplish this procedure by simple iris suturing, as an alternative to trabeculectomy. Hopefully, the gathering of the iris which placing a peripheral suture would produce would have the same effect of goniospasis as achieved by Cairns, and apparently produced by us (as well as Alpar, and Sherif and Dardenne) in our extracapsular surgery cases. Eventually we colleted 22 patients in this series, and the final tabulation seemed to show a marked beneficial result (Table I).

But there had been other patients operated on at the same time whose iris coloboma had not been sutured. Since the choice of suturing had been entirely random, this group of patients would seem to offer a reasonable control series. Accordingly their data was also gathered, observing the same restrictions for qualification in this study. 20 such patients constituted the control group.

To our surprise the control group showed an almost identical amelioration of their glaucoma (Table 2).

## CONCLUSION

We must conclude that the goniospasis produced by suturing of a surgical iris coloboma has no beneficial effect on the control of intraocular pressure. Instead, the identical results seen in our two series of patients would indicate that the improvement in glaucoma control was secondary to the cataract surgery rather than to the goniospasis produced by closure of the iris coloboma. We will continue to close iris colobomas with sutures when we wish, but for tectonic reasons rather than for better control of the patient's glaucoma.

*TABLE I*

| w/Suture | Pre-op | Post-op |
|---|---|---|
| Highest IOP | 32.77 | 21.41 |
| Average IOP | 21.79 | 17.27 |
| No. of Rx's | 1.55 | 0.82 |
| Average C | 0.16 | 0.14 |

*TABLE 2*

| CONTROLS | Pre-op | Post-op |
|---|---|---|
| Highest IOP | 30.85 | 21.60 |
| Average IOP | 23.05 | 17.58 |
| No. of Rx's | 1.23 | 0.50 |
| Average C | 0.11 | 0.10 |

## REFERENCES

1. CAIRNS, J. E.: *Goniospasis: a method designed to relieve canalicular blockade in primary open-angle glaucoma.* Anals of Ophthalmology 8: 1417-1422, 1976.

2. ALPAR, J.: *Personal communication.*

3. *SHERIF, A.S. and DARDENNE, M.U.: Posterior chamber lens implantation in patients with glaucoma.* Cataract 1: 6-9, 1984.