

EXPERIMENTAL CLOSURE OF VENTRICULAR SEPTAL
DEFECTS

1) INTRO and METHOD:

"We have been studying a means of closing VSD's by
an indirect method"

a) Intro; ^{during} for the past year we have undertaken a study to devise
a method of closing ventricular septal defects ~~by a~~ ^{by an} indirect ^{approach}
~~method~~, i.e., without the use of an extracorporeal circulation
or hypothermia.

→ This has been accomplished ^{in dogs} by securing a polyethylene plate (or disc)
in the defect by an approach through the ventricular septum.

b) Method:

1) Defects Created; using a method worked out previously by
Dr. Elton Watkins in ~~this lab~~ our laboratory.
(Children's Surgical Labs) A special punch is
put through the right ventricular wall (ventriculotomy)
to cut out a defect in the ventricular septum.
Could immediately feel a systemic thrill!

2) Defects Repaired:

Slide #1:

- 1) Palpating finger through tricuspid valve
(via Right Atrial appendage)
- 2) Septal Incision through mattress pursestring
sutures.

No blood loss!

Slide #2:

Then a polyethylene plate is
cut slightly larger than the
defect.

- ~~Also~~ This attached to Malleable
Needle

Slide #3: ~~The polyethylene plate and malleable needle, for a hole of about 1.5 cm.~~

1) Needle is guided through the septum & the palpating Finger!

Slide 3 remains on - Lights out while I keep Talking
↓

2) RESULTS:

a) 20 Dogs were operated with this method: High defects of 1 to 2.5 cm were created and then closed.

~~17~~ 17 Survived of these 20: (rest dead from hemothorax)

b) Electrocardiograms were taken during and after operation.

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Dogs were sacrificed ^{in good health!} at various intervals up to 9 months. (some still living)

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Pictures and Microsections: were taken of each heart.

c) All defects were closed immediately after operation; systolic thrill gone.

" as we could see ~~by~~ ^{in good health!} when the dogs were sacrificed, ^(Confirmed by sacrifice) no systolic thrill disappeared! (blue blood sacrifice.)

And the method & sequence of healing was as follows!

Slide #4: ^{typical} Defect made with punch. (Immediately post-op)

Slide #5 Defect immediately after closure.