AN EASY WAY TO SUCCESSFUL COLON SURGERY

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The results of Colon Surgery have been changed during the last 30 years. In 1900, the mortality rate ranged between 30% up to 50%. Now a days, those number range at about 10%. We have to divide the complete group of colon resection into two parts. One represents the uncomplicated colon, the other summarises the cases with complete ileus and similar preoperative complications. In the first group the mortality is about 5%, in the second group about 15%.

Fig. 1

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I would like to show you our results : The first figure demonstrates the material. The 195 cases, treated during 4 years, represent every case admitted in this time to our hospital. The age distribution, as well as the sex distribution, correspond to the situation of an industrial nation.

The second slide shows the variety of disease of our material I have to add, that we observe an increase of inflammatory lesions, especially of Crohn's disease, in the last 1 1/2 year. But still the carcinoma are predominant.

Fig. 2

n=195

1968—1971

The third figure shows the localisation of the lesions. E-E means End-to-End, S-S mean Side-to-side Anastomoses. The resections in the sigma-area are with 60% predominant.

Fig. 3

In the following three figures I would like to present you our routine procedures. The first of these figures contains the preoperative management. We believe, that the preoperative preparation of the patients is one of the most importance, especially when the anastomosis without any anus or fistula is the object of one's desire. The next figure summarises a few points for the operative procedure itself. If one handles with a well prepared patient and follows these headlines, an additional anus or fistula could be avoided. In the following schedule of the postoperative management you will certainly find many points well known to everybody. So I will concentrate my remarks on the following problem.

Fig. 4

Standard procedure

I

(Preoperative Schedule)

- 1.) General medical check up
- 2.) Digitalisation ca. 3 – 4 days preop.
- 3.) Application of Sulfonamids
(Humatin®, 8 × 250 mg/die, 4 days
preop.)
- 4.) Mechanical cleaning of the colon

Fig. 5

Standard procedure

II

**(Recommendations for the operative
procedure)**

- 1.) End – to – End Anastomosis and
End – to – Side Anastomosis
in two layers and single stickers
 - a) Mucosa with Catgut
 - b) Sero-muscularis with Silk
- 2.) Careful protection against contamination
of abdominal organs and wall
- 3.) Desinfection of Colon-stumps by Chlo-
ramine
- 4.) Intraoperative application of antibiotics
 - a) parenteral
 - b) local
- 5.) Digital dilation of the anus

Fig. 6

Standard procedure

III

- 1.) Intensive care for ca. 3 days
- 2.) Secretion control by gastric and urinary bladder tubes ca. 3 days
- 3.) Laboratory controls including blood gases measurement
- 4.) Parenteral nutrition ca. 3 days:
 40 ml/kg/body weight p.d., including
 50% Carbonhydrates
 25% Electrolyte Solutions
 25% Amino-acid
- 5.) Dehydration of the bowels by Rheomacrodex[®] and Sorbit₂
- 6.) Special attention to secondary Hyperaldosteronism
- 7.) Tonisation of the bowels by Parasympaticomimetica (e.g. Prostig min[®] and vitamin B₁₂) at the 2. to the 5. postop. day)
- 8.) Mechanical cleaning of the colon at the 3. to 5. postop. day
- 9.) Mobilisation of the Patient on the 1. postop. day
- 10.) Digitalisation, Antibiotics
- 11.) Diet from 4. to the 8. postop. day
- 12.) Normal food ca. 9. postop. day under clinical control

The point 5, describing the administration of Rheomacrodex and of Sorbit, is of high importance. The same is to say for the points 6 and 7. With these schedules the normal activity of the bowels can be restored on the 4th to the 6th postoperative day.

The following slide shows you the results of 116 cases. We omitted in these statistic the patients with severe preoperative without any complications. You will see that the number of patients without any complications in 78% and that the mortality rate ranges by 4-4%.

The last figure finally shows the importance of the "One-Step" procedure. Even with relative old patients, you can shorten the hospitalization time to 18 days. Any preoperative or intra-operative complication, which demands fistula or anus, causes that the hospitalization time will be increased, for a minimum be double.

Fig. 7
Cases with radical Colon Resection
without preop. complications and
with routine preparation

n = 116 = 100%				Hospitalisation postop. X = 21 days			
preop. Sulfonamid	Op.-Technique E-E S-S Anastomosis	postop. treatment Postigmin 01.Ric.	No compli- cations	complications			
				sut. line insuff.	sec. wound- healing	prim. mortality	
83%	76%	79%	78%	5%	14%	4.4%	
		6%		with Op		Suture insuff.	1.7%
				3.4%	1.7%	Pulm.art.emb.	0.9%
				without Op		Hemorrhage	0.9%
				1.7%	12.3%	Apoplexia	0.9%

Fig. 8

Comparison of the one step to the two step
(multiple step) procedure

(based on survivors without extraordinary complications)

	No	Hospitalisation postop.
<u>One Step Procedure</u>		
a.) prim. Resection	142	18 days
<u>Multiple Step Procedure</u>		
a.) Resection and Fistula or Anus	3	36
b.) Closure of Fistula or Anus		
a.) Enteroanastomosis only	3	34
b.) Resection		
a.) Anus or Fistula		
b.) Resection	8	70
c.) Closure of Fistula or Anus		

I would like to summarize my experiences. Even at a hospital with young surgeons in training, an easy and successfull way of colon surgery is possible. This way is easy for the patient as for the surgeon as for the nurses. The success is not only based on a skilled operative technique and I believe, that the most accurate guidance during the preoperative and specially during the postoperative treatment of the patient, is of the same importance.