

Evaluation of Sulodexide effect on the peritoneal protein loss and the dialysis quality

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Introduction and aims:

○ Peritoneal protein loss is a well-known, undesired consequence of peritoneal dialysis (PD). The importance of the latter is directly related to alterations of the peritoneal membrane. Supplementation of PD fluids with glycosaminoglycans has been shown to be beneficial to both the structural and functional integrity of the peritoneum.

○ The main aim of this study is to analyze the effects of administration of sulodexide on peritoneal protein leakage and dialysis quality in patients treated with PD.

Methods:

□ This is a prospective study that included 6 patients treated by peritoneal dialysis for at least three months.

□ Exclusion criteria: peritonitis in the 6 last months or during the study, also patients previously treated with Sulodexide.

□ Our study lasted three months from August 2014 to October 2014.

□ Patients received intra peritoneal injection of Sulodexide at the dose of 600 IU daily for 10 days. All of them were examined before the treatment and after ten and thirty days of treatment.

□ Laboratory examination performed: albumin in the peritoneal fluid, KT/V and the residual renal function (RRF).

Results:

1. peritoneal albumin leakage:

Sulodexide treatment in peritoneal dialysis patients induced a significant reduction in the loss of albumin evaluated in the dialysis fluid stasis after 4 hours which decreased from 0.90 ± 0.40 g / l before the treatment to 0.67 ± 0.36 g / l after 10 days and to 0.43 ± 0.22 g / l after thirty days of initiation of the therapy. This reduction was accompanied by a significant increase in serum albumin at the thirtieth day ($p=0,042$).

2. peritoneal function quality of peritoneal dialysis and RRF/

A significant increase of the Results of dialysate over plasma ratio of creatinine (D/P creat) ($p=0,028$) and urea (D/P urea) ($p= 0,048$) was demonstrated. An increase in the RRF was also noted (1,1 : first day vs. 1,63 : thirtieth day, $p < 0.03$) as well as a significant decrease in proteinuria in patients treated with sulodexide both at the tenth and the thirtieth day(table).

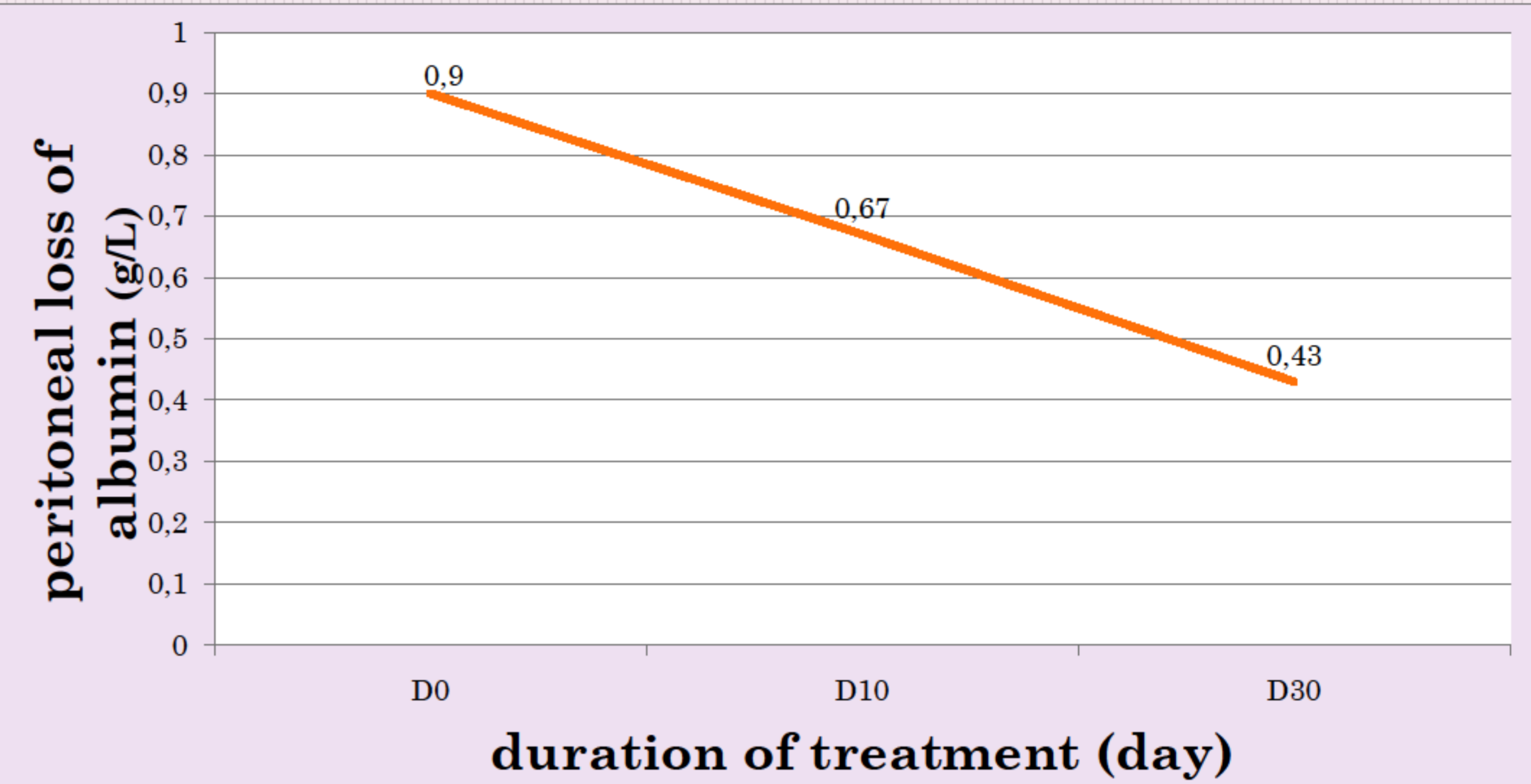


Figure n 1: Evolution of peritoneal albumin leakage in g / L:

TIME	D0	D10	D30	P
Kt/V	2,03 ±0,94		2,17± 0,45	0,345
Peritoneal clearance of creatinine (ml / min)	63,42 +/-		75,25± 17,38	0,028
D/P creat	0,63± 1,45	0,7± 0,58	0,85± 0,073	0,028
D/P urea	0,63± 0,15	0,83± 0,12	0,79± 0,2	0,048
RRF (ml / min)	1,1		1,63	0,254

Table n 1: Effects of sulodexide on peritoneal function quality of peritoneal dialysis and on RRF:

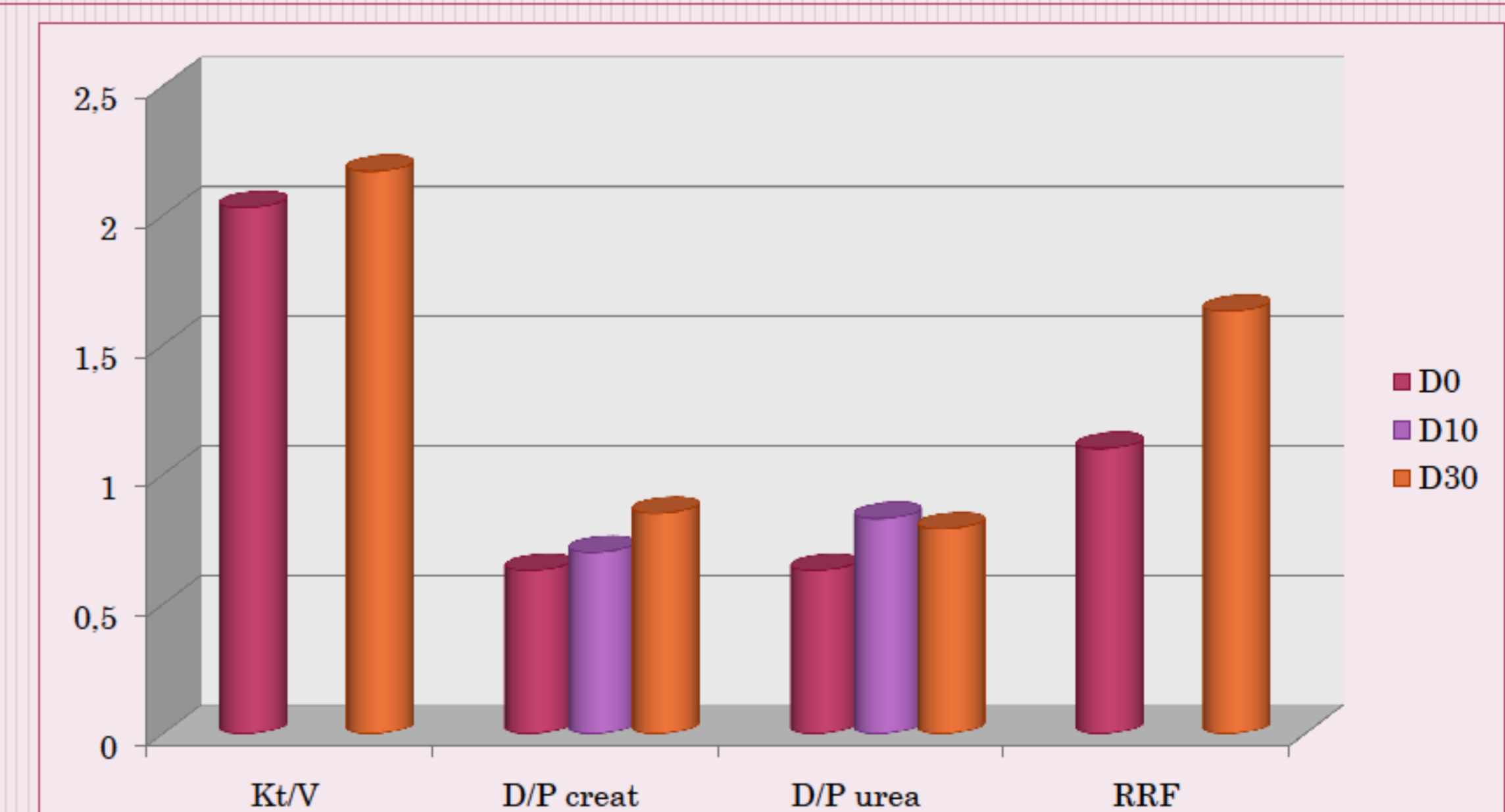


Figure n 2: Evolution of peritoneal function and RRF:

Conclusion:

Supplementation of PD solutions with GAGs may be a novel means by which the structural and functional integrity of the peritoneum can be preserved. In our study, within 30 days, Glycosaminoglycans used in peritoneal dialysis patients induced reduction in the loss of albumin in addition to improvement of the quality of dialysis and the residual renal function (RRF).

