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Further Studies on Splenectomy Techniques in Equine(donkeys) An experimental study

A Thesis presented
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Abstract:
In the present study encompassed of twenty one experimental donkeys that divided into 2 main groups: group one for partial splenectomy and group two for total splenectomy. Group 1 and group 2 were sub divided to 3 subgroups and 4 subgroups respectively 3 animals for each technique. Partial splenectomy was performed after partial resection of 15th ,16th and 17th ribs and total splenectomy performed after partial resection of 16th and 17th ribs either in standing or recumbent position. Regarding splenectomy in standing postion splenectomy after resection of the 17th rib was better than that of the 16th rib. Resection of the 16th and 17th ribs were found suitable and easy for performance in case of recumbency, where 16th rib approach was more convenient. All over the techniques, the cut ribs have kept without total removal while the severed bone could be kept intact a fact which is considered a new idea in case of partial and total removal of the spleen. Total Splenectomy following resection of the 17th rib in the standing position was better than that performed in lateral recumbency and after resection of the 16th rib in standing position. partial splenectomy after partial resection of the 16th rib was the most appropriate method for partial splenectomy. The animals subjected to ultrasonographic examination before and after the surgical approach to clarify the volume and exact location of the spleen and its relation to other abdominal organs. Doppler ultrasound examination was adopted on normal donkeys and after partial splenectomy, 7 times scan with 3 days interval to estimate normal splenic artery indices and post partial splenectomy. After partial splenectomy, the splenic blood flow and perfusion decreased directly 3 days postoperatively then increased gradually. The red and white cell count and the blood platelet value before and postoperative has also recorded. It is noticed that the blood platelet value has decreased postoperatively and regained its normal value within 2 weeks in case of partial splenectomy while showed marked increase in total splenectomy. Histopathological examinations have been also adopted in case of partial splenectomy to show the degree of healing of the splenic tissue. Clinical examination of all submitted groups has been also carried out and recorded daily after each surgical approach, and so one can assure that all operated cases have done well and regained their normal attitude few days postoperatively.
Keywords: Doppler, rib, spleen, splenectomy, splenic artery, ultrasound.

Dedication

I will dedicate this study to ***my parents , my brother and sisters*** *for their understanding, support and helping me to succeed. Thank you for every unconditional love and guidance.*

Finally, I will dedicate this study to ***my wife,*** *who inspired me to be strong despite many obstacles in life .Thank you for everything.*

To ***my daughter farida*** *and* ***my son Youssef***

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List of Abbreviations

Abbreviation	Scientific Meaning
ANOVA	Analysis of variance
bpm	Beat per minute
EDTA	Ethylene diamine tetra acetic acid
EDV	end diastolic velocity
HCT	Hematocrit
Hgb	Hemoglobin
i.m	Intramuscular
i.u	International unit
i.v	Intravenous
IgM	immunoglobulin M
Kg.b.wt	Kilogram body weight
M	mean
MCH	Mean Corpuscular Hemoglobin
MCHC	Mean Corpuscular Hemoglobin Concentration
MCV	Mean Corpuscular Volume
mg	Milligram
MPV	Mean Platelet Volume
PCT	Plateletcrit
PDW	Platelet distribution width
PI	pulsatility index
PLT	Platelets
PSV	peak systolic velocity
RBCs	Red Blood Cells
RI	resistance index
S/D	systolic/diastolic
SD	standard Deviation
SEM	standard error of mean
Sp	Spleen
Sp A	Splenic artery
SPSS	Statistical Package for Social Sciences
St	stomach
TAMV	Time average maximum velocity
WBCs	White Blood Cells

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