**OBJECTIVES**

- Make a bibliographic review where the surgical techniques previously used for lobectomies and liver biopsy and the contribution of new techniques are studied.
- Describe the pre and post operative care of the hepatectomized patient.
- Investigate new technologies for the control of intraoperative hemorrhages.
- Study the classification of liver tumors and expose existing supportive therapies for patients with hepatic neoplasia.

**1. INTRODUCTION**

Guillotine lobectomies and hepatic lobule fracture, traditionally used, has a high mortality rate and complications from trans and post surgical hemorrhage, especially in large dogs. In 2009, Covey describe the anatomy of the hepatic lobule detailing the relation of the hepatic veins and biliary system in relation to the portal vein, allowing the study of the lobe as an anatomical region and thus generating a new surgical approach proposal.

**2. ANATOMY OF DOG LIVER (REGIONS)**

- **CL**: Lobe Circulus Longus
- **RLL**: Lobe Rectus Lateralis
- **RML**: Lobe Rectus Medialis
- **LL**: Lobe Left Lateralis
- **LM**: Lobe Left Medialis
- **QL**: Lobe Quarter Lateralis
- **PL**: Lobe Quarter Medialis
- **RLL**: Right Lobe Lateralis
- **RML**: Right Lobe Medialis
- **LL**: Left Lobe Lateralis
- **LM**: Left Lobe Medialis
- **QL**: Quarter Lobe Lateralis
- **PL**: Quarter Lobe Medialis

Source: (Covey et al., 2009)

**3. PATHOLOGIES**

**3.1 TUMORS**

<table>
<thead>
<tr>
<th>Tumor type</th>
<th>massive</th>
<th>nodular</th>
<th>diffuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatocellular carcinoma</td>
<td>53%-84%</td>
<td>16%-25%</td>
<td>0%-9%</td>
</tr>
<tr>
<td>Bilar duct carcinoma</td>
<td>37%-46%</td>
<td>0%-46%</td>
<td>17%-54%</td>
</tr>
<tr>
<td>Neuroendocrine tumor</td>
<td>0%</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>Sarcoma (mesenchimal)</td>
<td>36%</td>
<td>64%</td>
<td>0%</td>
</tr>
</tbody>
</table>


**4. DIAGNOSIS**

There are different type of diagnostic techniques that will be depending on the type of patient and pathology.
- **Rx**
- **TOGRAPHY (TAC )**
- **MAGNETIC RESONANCE (MRI)**
- **ECOGRAPHY , MICROBUBBLES (CEU)**
- **CITOLOGY: FINE NEEDLE PUNCTURE**
- **BLOOD PRESSURE**
- **UHEMOGRAM**

**5. PRE AND POST SURGICAL TESTS**

**PRE**
- **BLOOD PRESSURE**
- **TOTAL PROTEINS**
- **PT & PTT**
- **HEMOGRAM**
- **BLOOD CHEMISTRY**
- **CROSS MATCH**
- **BLOOD TYPOLGY**
- **CONCONANT / METASTATIC DISEASES**
- **HOMOPARASITES**
- **PALPATION**

**POST**
- **BLOOD PRESSURE**
- **TOTAL PROTEINS**
- **PT & PTT**
- **HEMOGRAM**
- **BLOOD CHEMISTRY**
- **TEMPERATURE**
- **LACTATO**
- **URINE PRODUCTION**
- **C PROTEIN**
- **ELECTROLITES**
- **GLUCOSE**

**6. PATIENT SELECTION CRITERIA**

**TECNIQUE**

- **HILAR LIVER RESECTION**
- **GUILLOTINE TOTAL LOBECTOMY**
- **GUILLOTINE PARTIAL LOBECTOMY**
- **WEDGE PARTIAL LOBECTOMY**
- **FRACTURE PARTIAL LOBECTOMY**

**7. HILAR LIVER RESSECTION**

We began the dissection of the bile duct and the hepatic artery of the left lateral lobe.

**8. SUPPORTIVE THERAPY**

- **EMBOLIZATION**
- **LIPIODOL**
- **POLYVINYL ALCOHOL PARTICLES**
- **CONVENTIONAL CHEMOTHERAPY (MTD) + NSAID**
- **METRONOMIC CHEMOTHERAPY + NSAID**

**9. NEW TECHNOLOGIES**

- **UGARATURE OF THE MAIN VESSELS OF EACH LOBULE**
- **HEMORRHAGE TRANS AND POST SURGICAL**
- **BILARY SPILL PERTONITIS**
- **RESECTION OF A HEPATIC REGION WITHOUT COMPROMISING THE VASCULATURE OF ANOTHER**
- **SURVIVAL IN ALL SIZES OF DOGS**

**CONCLUSIONS**

The performance of pre and post surgical examinations allows us to adequately evaluate the patient.

The lobectomy by hilar dissection is definitely the best technique to resolve tumors in the dog as it reduces survival by reducing trans and post surgical complications.

The use of technology in surgical tools increases success.

The use of traditional chemotherapy, metronomics and interventional radiology techniques offer new options for patients with reserved prognosis. Adept post-surgical patient care offers a higher survival rate.

**REFERENCES**