Retrospective Study of Tumors of the Upper Digestive Tract Diagnosed & Treated in the Last 5 Years

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A total of 207 patients newly diagnosed of tumors in upper GI tract between 2001 and 2005 in CHCSJ were included.

<table>
<thead>
<tr>
<th>Location</th>
<th>Count</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esophagus</td>
<td>65</td>
<td>62 Squamous cell carcinoma</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 Other carcinoma</td>
</tr>
<tr>
<td>Stomach</td>
<td>136</td>
<td>125 Adenocarcinoma (primary)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 GISTs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 Lymphoma</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Secondary</td>
</tr>
<tr>
<td>Duodenum</td>
<td>6</td>
<td>2 Adenocarcinoma</td>
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</tbody>
</table>
All analyses in the present study are based on the data of the 187 patients who had either resectable or unresectable primary esophageal SCC and gastric adenocarcinoma.

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n=187
Patients

► All the cases were received endoscopy in endoscopic centre of CHCSJ.

► A complete macroscopic and microscopic tumor resection could be achieved in 114 of the 187 patients.

► Only 1 patient with gastric cancer is Portuguese.

► The resected specimen were evaluated histopathologically.

► Cases were followed till the end of 2006.
Esophageal SCC
Age Distribution of Esophageal SCC

- 40-49 yr: 28%
- 50-59 yr: 21%
- 60-69 yr: 16%
- 70-79 yr: 21%
- ≥80 yr: 14%
Age & Number of Esophageal SCC

Male : Female = 4 : 1
Site Distribution

Dysphagia 85%
Lower third 45%
Upper third 6%
Middle third 49%

Dysphagia 75%
Dysphagia 73%
Cancer Staging

AJCC Cancer Classification, 2002

- Not available (27%)
- I (0%)
- II (22%)
- III (38%)
- IV (13%)
# Adjuvant & Palliative Rx

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemotherapy</td>
<td>16</td>
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<tr>
<td>Radiotherapy</td>
<td>7</td>
</tr>
<tr>
<td>Chemo + Radiotherapy</td>
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<tr>
<td>Endoscopic stenting</td>
<td>4</td>
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<tr>
<td>Surgical by-pass</td>
<td>5</td>
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</tbody>
</table>
Overall Survival Curve of Esophageal SCC

P <0.005
Influence of Tumor Resection

![Survival Curve Graph]

- **Operation**
  - **No Resection**
  - **Resection**
  - **.00-censored**
  - **1.00-censored**

**Survival Functions**

**Influence of Tumor Resection**

- **No Resection**
- **Tumor Resection**

**Months**

**Cum Survival**

- **P <0.005**
Gastric Adenocarcinoma
Age Distribution

- <30 yr, <1%
- 30-39 yr, 3%
- 40-49 yr, 9%
- 50-59 yr, 16%
- 60-69 yr, 22%
- 70-79 yr, 25%
- ≥80 yr, 24%
Distribution of Age & Number

Male : Female = 1.7 : 1
H. Pylori Infection & Gastric Cancer

Diagnosed by rapid urease test or histology
Site Distribution

China, Macau (2001-2005)

Japan, Yamagata (1993-1997)
Japan, Nagasaki (1993-1997)
Japan, Osaka (1993-1997)
Japan, Saga (1993-1997)
Japan, Miyagi (1993-1997)
Korea, Seoul (1993-1997)
China, Taiwan (1997)
China, Shanghai (1993-1997)
Colombia, Cali (1992-1996)
Ecuador, Quito (1993-1997)
Belarus (1993-1997)
Russia, St Petersburg (1994-1997)
Italy, Romagna (1993-1997)
Germany, Saarland (1993-1997)
The Netherlands (1993-1997)
USA, SEER (1993-1997)
Sweden (1993-1997)
Presenting Symptoms

- Bleeding: 37%
- Others: 18%
- Vomiting: 9%
- Dysphagia: 7%
- Dyspepsia: 22%
- Iron Deficiency Anemia: 11%
Cancer Staging

Not available (21%)

I (14%)

II (11%)

III (17%)

IV (37%)

AJCC Cancer staging, 2002
Treatment

- Tumor resection: 60%
- Unresectable tumor: 6%
- Palliative surgery: 15%
- Abandon: 19%

Total number = 125
Influence of Staging

![Survival Functions](image)

- Stage I
- Stage II
- Stage III
- Stage IV

Staging

- Stage I
- Stage II
- Stage III
- Stage IV

P <0.005
Influence of Adjuvant Chemotherapy

Adjuvant chemotherapy
- Nil
- Given

Cum Survival
- 1.00-censored
- .00-censored

P <0.005
Although age standardised incidence and death rates have been declining for decades worldwide, the absolute number of cases of gastric cancer in Macao shows an increasing trend.

The inverse trend between the absolute numbers and age standardised rates is considered to be attributable to the rapid aging of the population.
In Macao, *H. pylori* infection in patients with gastric cancer is up to 48%.

That is a lower percentage comparing to the western countries and Japan.

It is considered that apart from the risk of *H. pylori* infection, there are other risk factors to contribute gastric cancer, such as dietary habits, smoking, host factors, and the comparatively poor socioeconomic environment.
Discussion (3)

- Nearly half of the gastric cancer present with active or occult gastrointestinal bleeding in Macao.
- The ratio is much higher than those of adjacent countries such as Japan and Korea, in which the major presenting symptom is dyspepsia.
- And we know that disease in earlier stage has a much better prognosis.
- The priority is to increase the early detection rate.
The Department of Health in Macao consists of one central hospital and six health care centers located throughout Macao. We can provided comprehensive medical care to our residents. We can achieve early detection via:

- Public education
- Increase awareness of the dyspepsia
- Widen the indications of OGD
Conclusion

► Esophageal SCC and gastric adenocarcinoma are not rare in Macao.

► The earlier the diagnosis, the better the prognosis.

► The goal of our service is to increase the rate of early detection.
Firstly I will talk about the esophageal SCC. In Macao between 2001 and 2005, no patient was diagnosed under the age of 40. Approximately half of patients between 40 to 60, and the rest more than 60. That is quite different from western countries where the risk of esophageal cancer increases with age. Moreover, the number of younger patients has shown obvious increase in last 3 years.

The ratio of men to women was 4.

SCC are more evenly distributed between the middle and lower third of esophagus. The cervical esophagus is an uncommon site of disease. And at least three quarter of patients with esophageal cancer had dysphagia at the time of diagnosis.
Esophageal CA

Regardless the 27% of patients who abandoned further management, according to the 2002 AJCC classification system, over 50 percent of patients had advanced disease namely the stage 3 and 4. None in stage 1, and only 22% of patients were in stage 2. Moreover, nearly half of those staging patients had unresectable or metastatic disease at the time of diagnosis.

We offered adjuvant and palliative treatment apart from surgery.

The overall survival rate of esophageal SCC is poor, only 14 patients, namely 23% of total cases are alive. For those no indication for surgical resection, the 1-year survival rate is only 4%. After curative surgical removal of the tumor, the 1-year survival rate exceeds 40%, and 3-year survival rate is 12%.
With the data for Gastric adenocarcinoma

► The number of cases tends to be influenced by age distribution. In Macao, between 2001 and 2005, the newly diagnosed number of gastric adenocarcinoma increased with age, especially the proportion in age more than 60 years, occupied 71% of total cases. The trend of cancer occurrence towards a decline is more prominent in younger, than in older age groups, and there was an increasing trend only among those in age over 80.

► Unlike the esophageal cancer, the male to female ratio of gastric cancer was more even, about 1.7.

► *H. pylori* infection is considered as a well-known important risk factor of gastric cancer. In my study, *H. pylori* infection was diagnosed by either CLOtest or histology. The presence of infection in gastric cancer ranging from 36 to 48%.
For the distribution of tumor site, 80% of cases located in the middle or lower thirds of the stomach. About 13% of cases are located in the upper portion. Compared to other regions, the number in Macau is most similar as in Japan rather than in Taiwan and mainland China, and obviously different as in Europe and United State.

The initial presenting symptoms depend on the location of the tumor. Dysphagia and vomiting presented in 16% of patients who usually had tumor at cardia or fundus. Patients with epigastric pain occupied around 22% of total cases and were often diagnosed by a elective endoscopy. Unfortunately, I observe a quite large proportion of patients being found gastric adenocarcinoma when they presented as a emergency event of hemorrhage. Majority of those patients had tumor locating at distal part of stomach. Whereas, tumors at proximal stomach had a higher chance of earlier stage of disease, than the tumor at gastric body or antrum.
In Macau, majority of gastric cancer located in distal portion of stomach and most of them are diagnosed when they presented with bleeding, over half of all patients had stage 3 and 4, in which the proportion of stage 4 reached about 37% in all cases.

In these 5 years, 60% of patients received a curative resection after diagnosis. Unresectable tumor was about 6%. The rest of patients including those refused further management in our hospital and those chose palliative operation, most of them were very old patients.
As our expectation, the worse the cancer stage, the less the survival. The overall 3-year survival rate in stage 1, 2 and 3 is over 50%. But in stage 4 which included 47 patients, only 2 patients are alive now.

With operation, the 5-year survival rate in some patients is around 40% after a curative resection. Otherwise no patient survive over 1.5 year. Moreover, those patients received palliative operation have shown no significant improvement in survival.

Adjuvant chemotherapy after curative tumor resection can improve the survival rate as well.