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## Toho Journal of Medicine Vol. 5 No. 1 掲載論文の紹介

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Social Contribution of Ophthalmologists through Dry Eye Research

Hori Y

Toho J Med 5 (1): 1—6, 2019

**要約 :**

Currently, the Department of Ophthalmology of Toho University is engaging in various types of research with the aim of contributing to society. One of the areas of our research is DRY EYE. There are over an estimated 10 million patients with dry eye in Japan, and the number is believed to keep increasing, thus suggesting the extreme importance of research on dry eye treatments.

Our research team has focused on mucins, one of the components of the tear film along with water and lipids. In Japan, diquafosol tetrasodium and rebamipide, two mucin secretagogue eye drops, are used as first-choice drugs to treat dry eye. When we compared these two drugs, we found that the secretion of tears promoted by these drugs had different characteristics. These studies made it possible to differentiate how these two drugs are used depending on the dry eye conditions.

The author is one of the organizers of the Japan Dry Eye Society. The Japan Dry Eye Society revises the definition and diagnostic criteria of dry eye every 10 years, conducts academic activities as well as promotes awareness on the importance of tears and dry eye treatment to the people of Japan. Through the efforts of the Dry Eye Society, July 3<sup>rd</sup> was established as “Tears Day” in 2017. We have held various events associated with “Tears Day,” and hope to continue to make social contributions through our work and involvement in the field of dry eye research and treatment.

**KEYWORDS: ophthalmologist, social contribution, dry eye, mucin, Japan Dry Eye Society, Tears Day**

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Comprehensive Cost of Illness: A Novel Method to Evaluate Economic Burden of Disease in a Super-aged Society

Matsumoto K, Hasegawa T

Toho J Med 5 (1): 7—12, 2019

**要約 :**

Appropriate allocation of limited healthcare resources has been among the major challenges of making health policy decisions. Cost of illness (COI) is a simple and convenient approach that measures the burden of disease in terms of monetary cost. This method has been criticized because it only covers costs without considering outcomes, and it is unclear who has to pay the cost. However, COI is relatively simple to calculate compared with other methods for economic evaluation, and it has been used for political decision-making. In an aging society, costs of treating diseases that require long-term care keep on increasing. We propose the comprehensive-COI, which modifies the original method to include both the direct costs of long-term care and the family burden of unpaid costs. Consideration of all the aspects of COIs can facilitate more precise evaluation of the economic burden of diseases.

**KEYWORDS: cost of illness study, economic evaluation of health care, economic burden of disease, health economics, health policy**

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Role of the Capillary Invasion Index: A Prognostic Indicator for Adenocarcinoma of the Esophagogastric Junction

Kawahira H, Yoshida Y, Urita T, Takagi R, Oshiro T, Okazumi S

Toho J Med 5 (1): 13—19, 2019

**要約 :**

**Introduction:** Adenocarcinoma which occurs in the esophagogastric junction (EGJ) does not have a clear answer with regards to surgical procedures and the prognosis. In the present study, prognostic evaluation factors, including patient characteristics and results of pathological examination were evaluated.

**Methods:** The present study included 29 patients with adenocarcinoma of the EGJ who underwent R0 surgery at our department between January 2007 and December 2016. Univariate and multivariate analysis were conducted to examine the associations of age, sex, tumor size, histopathological type, depth of tumor invasion, lymph node metastasis, pathological disease stage, neoadjuvant and adjuvant chemotherapy, and lymphatic and vascular invasion index or “LV Index” as prognostic factors for survival. The log-rank test was used to determine differences in survival between groups for each factor.

**Results:** On pathological examination, the median maximum tumor size was 33 mm (range: 11-113 mm), and the median location of the center of the tumor relative to the EGJ was 13 mm distal to the EGJ (range: 7 mm proximal to the EGJ to 20 mm distal to the EGJ). For the LV Index, the hazard ratio was 0.136 (95% confidence interval (CI), (0.016-1.171;  $P = 0.069$ ) on univariate analysis, and 0.102 (95% CI, 0.009-1.115;  $P = 0.061$ ) on multivariate analysis. Survival rate was significantly different between the high and low LV Index groups ( $P = 0.033$ , log-rank test).

**Conclusions:** Evaluation of prognosis in patients who underwent R0 resection for adenocarcinoma of EGJ at our hospital showed that the LV Index based on the lymphatic and vascular invasion contributes to survival as a prognostic factor.

**KEYWORDS:** adenocarcinoma, gastric cancer, esophago-gastric junction, prognosis

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Pancreatic Insulinoma Associated with Stenosis of the Celiac Axis Due to Median Arcuate Ligament Compression

Kanazawa K, Yoshino H, Kakumae-Kojimahara Y, Yoshikawa F, Ando Y, Kumashiro N, Uchino H, Hirose T  
Toho J Med 5 (1): 20—23, 2019

**要約 :**

Median arcuate ligament syndrome (MALS) is a rare stenotic vascular disorder caused by fibrous bands connecting the left and right crus of the diaphragm. A 42-year-old man was admitted to our hospital. Computed tomography revealed 20-mm mass at the tail of pancreas. He was diagnosed as having insulinoma. Angiography showed increased blood flow from dorsal pancreatic artery to insulinoma. Enhanced computed tomography revealed stenosis in the celiac artery. Thus, he was suspected to be suffering from MALS. MALS should be considered when angiography of area surrounding the pancreas reveals blood flow different from that observed in normal anatomy.

**KEYWORDS:** median arcuate ligament syndrome, insulinoma

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Colonoscopy-assisted Placement of Percutaneous Endoscopic Gastrostomy: Report of Two Cases

Shigoka H, Maetani I, Yoshida Y  
Toho J Med 5 (1): 24—27, 2019

**要約 :**

Occasionally, percutaneous endoscopic gastrostomy placement cannot be completed due to anatomical reasons, such as the position of other organs. The location of the transverse colon ventral to the stomach made it difficult to prevent the accidental puncture of the colon in two elderly patients with dysphasia. We adjusted the position of the colon to clear the route to the stomach for puncture and safe gastrostomy tube placement. This technique of using a colono-

scope to push and bend the transverse colon inferiorly, which allowed us to successfully achieve gastrostomy placement without any adverse events, is an easy and effective method for moving interposed transverse colon segments for gastrostomy placement.

**KEYWORDS:** percutaneous endoscopic gastrostomy, colonoscope, gastrocolocutaneous fistula

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Comparison of Effects of Phosphodiesterase Inhibitors, a Rho-kinase Inhibitor, Ca<sup>2+</sup>-channel Blockers and a K<sup>+</sup>-channel Opener on Isolated Human Internal Mammary Arteries

Chiba K, Nakamura Y, Cao X, Fukuda S, Egi K, Hagiwara-Nagasawa M, Izumi-Nakaseko H, Ando K, Tanaka K, Naito AT, Sugiyama A  
Toho J Med 5 (1): 28—32, 2019

**要約 :**

Perioperative spasm of the grafts has been one of the most lethal complications during coronary artery bypass grafting. We compared the spasmolytic effects of 4 different pharmacological classes of vasodilators; namely, 3 kinds of phosphodiesterase inhibitors (papaverine, olprinone and milrinone), a Rhokinase inhibitor (Y-27632), 3 of Ca<sup>2+</sup>-channel blockers (nicardipine, nifedipine and benidipine) and a K<sup>+</sup>-channel opener (nicorandil), using the ring preparations made of human skeletonized internal mammary artery grafts. Ring preparations showing physiological dilatation with acetylcholine were used for the assay. The potency of vasodilator action was in the order of benidipine > milrinone > nifedipine > olprinone > papaverine > Y-27632 > nicardipine > nicorandil, which is new finding in this study. Thus, benidipine can be most expected to become an efficacious candidate for treating the vasospasm of internal mammary artery in clinical settings.

**KEYWORDS:** vasodilator, human internal mammary artery, vasospasm

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