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DIFFUSE SUBMUCOSAL CYSTS AND CARCINOMA OF THE STOMACH

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Gastric submucosal cysts, carcinomas, and atypical hyperplasia have been observed in the superficial mucosa of 12 stomachs. It is thought that gastritis may give rise to these heterotopic glands, that the development of heterotopic cysts in the submucosa may make the surface mucosa prone to erosion, and that repeated erosion and regeneration may cause carcinoma or atypical hyperplasia.
***Cancer* 36:606–614, 1975.**

THERE HAVE BEEN MANY REPORTS OF CASES of diffuse heterotopic cysts situated in the submucosal layer of the stomach.[1,10,21–24,27,28,31] More recently, cases of heterotopic cysts accompanied by gastric carcinoma have appeared.[5,8,11,12] However, in these papers the relationship between gastric carcinoma and cysts does not seem to have been fully described. In the present paper we discuss the relationship of these lesions and report on 12 cases.

MATERIALS AND METHODS

From July, 1961 to December, 1970, there were 362 cases of surface carcinoma of the stomach operated on at the Center for Adult Diseases, Osaka. Diffuse multiple glands or cysts in the gastric submucosal layer were found in 11 cases (3.0%). Out of 71 cases having mesenchymal tumor, ulcer, or other noncancerous lesions, only 1 (1.4%) had cysts. A detailed histologic study was made of the resected stomachs of these 12 cases with multiple heterotopic cysts. The stomachs of the 351 cases of gastric carcinoma and 70 noncancerous cases without such multiple heterotopic cysts were studied as controls. Furthermore, the autopsy material of 21 patients under 20 years of age who died of causes other than gastric disease was examined. Almost all of the resected stomachs were step-sectioned at 5-mm intervals and stained with hematoxylin-eosin, Masson-trichrome, PAS, and silver impregnation.

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Received for publication June 11, 1974.

RESULTS

Table 1 describes our 12 cases. They were all males; 4 cases in the 4th decade, 2 in the 5th decade, 5 in the 6th decade, and 1 in the 8th decade, with an average age of 57.6 years. In the control cases, there were 316 males and 105 females; their ages ranged from 19 to 75 years, with an average age of 54.2 years.

The heterotopic cysts were found in the submucosal layer only. Most of them occupied the upper layer, some penetrating the muscularis mucosae and connecting with the gastric glands in the deep layer of tunica propria mucosae, or directly with the proliferating cells in the neck zone of the mucosa (Fig. 1). Enlarged cysts were observed often in the deeper layer of the tunica propria mucosae. Most of the heterotopic glands and cysts consisted of a single layer of mucous cells with a clear cytoplasm and with the nucleus located near the basement membrane (Fig. 2). A few heterotopic glands containing chief and parietal cells were present. Even when severe intestinal metaplasia existed in the epithelial cells of the tunica propria mucosae, it was only rarely found in the heterotopic glands of the submucosa. Of about 4000 heterotopic glands examined, only 1 was of an intestinal type. No aberrant pancreatic tissue was found near the cysts. The heterotopic cysts were enveloped in muscle fibers; these were seen frequently in those cases with heterotopic glands, and were usually connected to the muscularis mucosae.

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研　究

胃粘膜下びまん性異所腺の102例の検討による胃癌発生機序に関する研究

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抄　録

切除胃2574例のうち，102例（4.0%）の胃粘膜下層に，びまん性異所腺が認められ，そのうち100例（98%）は胃癌を合併しており，その中でも33例（33%）は多発癌であった．

異所腺は，その88.8%が粘液腺からなり，その表層粘膜には，びらんまたは再生上皮，さらにはびらん性の異型的病巣が多く認められた．

以上より，胃粘膜における反覆するびらん・再生が，粘膜下層の異所腺を生じ，一方では胃癌を発生させたものと推定される．

はじめに

胃粘膜下層にびまん性に異所腺の存在する胃には，しばしば胃癌が併存し，とくに多発癌が高頻度にみられる．それでは，このような胃癌とびまん性異所腺との間にどのような関連性があるのかということから，胃癌発生の機序について検討した．

I　対象および方法

昭和40年から昭和56年までの17年間に大阪府立成人病センター外科において胃切除された2574例の胃標本を組織学的に検索した．これらの原疾患は，胃癌2359例，胃異型上皮および過形成性ポリープ20例，胃・十二指腸潰瘍138例，その他として胃肉腫および良性腫瘍など57例であった．

切除された胃は，通常大弯で開いてホルマリン液で固定し，長軸に平行な5 mm 幅の組織片を作製して，H-E, PAS, Masson, Mallory，鍍銀染色を施行した．

なお，胃粘膜下層に異所腺の認められた症例は多いが，その数と範囲によりわれわれはこれを表1のように分類している．この中でも広範に10カ所以上の場所で異所腺のみられたものを「びまん型」と称し，9カ所以下のものは，今回の対象から除外した．

表1　胃粘膜下異所腺の数と範囲による分類

びまん型	10カ所以上で，広範囲にわたるもの．
広範型	4～9カ所で，広範囲のもの．
限局多発型	4～9カ所で，限局性のもの．
孤立型	3カ所以下．

II　結果と考察

1．びまん性異所腺例と癌病巣の数

胃切除2574例中，びまん性異所腺例は102例（4.0%）に発見された．この102例について，表2に示すように合併した胃癌病巣の数別にみると，癌病巣の認められなかったのは2例（2%）のみであった．この2例も，そのうちの1例は吐

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キーワード：胃異所腺，胃癌発生，胃粘膜下腺

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An Endoscopic Recognition of the Atrophic Border and its Significance in Chronic Gastritis

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Summary

The endoscopic atrophic border is a boundary between the pyloric and fundic gland territories, which is endoscopically recognized by discriminating differences in color and height of the gastric mucosa. The existence of superficial gastritis might exaggerate the color and niveau differences, thus making it much easier to recognize the atrophic border. And also, according to the results of precise biopsy taken perpendicularly across the endoscopic atrophic border, it might be the boundary of histological atrophy and non-atrophy. In other words, the endoscopic atrophic border might be the boundary both of gland type and of atrophy. As a supplemental approach, a selective application of congo red method was endoscopically performed, which suggests that this might be a physiological border as well. Additionally, a classification of the atrophic pattern was attempted according to the location of the endoscopic atrophic border in the stomach, which revealed a close relationship with gastric analysis.

Endoscopy 3 (1969) 87–97

Key-Words: Atrophic border, pyloric and fundic gland area, congo red method, endoscopic biopsy, gastric analysis.

Since the advent of the fibergastroscope with its sharp image and excellent ability for accurate biopsy under direct vision, the morphological approach to chronic gastritis has been considerably improved. A diagnosis of chronic gastritis has become a positive diagnosis instead of a diagnosis per exclusionem as was true previously. With the highly developed techniques of endoscopy, it has become possible to make a strict histological analysis of a spot anywhere in the stomach with successful comparisons of endoscopic and histological findings topographically, which is surely of great significance, but this is still not enough for a comprehensive understanding of the various states of the stomach even from the histopathological point of view. It would be almost improper, in the diagnosis of chronic gastritis, to describe the complicated features of the stomach by mean of a single desultory pathological diagnosis such as superficial gastritis or atrophic gastritis as is customary at present. That is to say, it must be said that much has still remained unsettled in this field in spite of steady progress. An endoscopic recognition of a boundary between the pyloric and fundic gland territories would be significant for integrating a topographical analysis with a comprehensive description of the stomach, not only in chronic gastritis but also in other gastric diseases (4).

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Endoscopic atrophic border

One of the typical pictures of the so called endoscopic atrophic border is shown in Fig. 1. In this case, the endoscopic atrophic border is located just between the lesser curvature and the anterior wall slightly above the angulus. The atrophic finding of a capillary network is visible on the one side of the border, but on the other side no atrophic findings are present. Such typical cases of an

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症 例

長期間経過を追えた微小胃底腺型胃癌の1例

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齊藤知規[1] 岡野 宏[1] 松崎晋平[1] 熊澤広明[1] 渡辺 玄[3]

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要 旨

症例は57歳女性. 7年前に胃癌に対しESDが施行され, *H.pylori*除菌後, 経過観察中であった. 5年前の上部内視鏡検査において, 胃体下部大彎前壁に3mmの白色粘膜領域が確認されたが, 4年前の鉗子生検では確定診断に至らなかった. 3カ月前の上部内視鏡検査での鉗子生検において, 胃底腺型胃癌を疑われESDが施行された. 病変の病理組織診断は胃粘膜内に限局する胃底腺型胃癌と診断された. 免疫組織化学的検討ではペプシノーゲンIが部分的に弱陽性, MUC6がびまん性陽性で, Ki67 indexは3%以下であった. 本疾患は近年定義された新しい疾患概念であり, 微小病変を長期に観察し得た本症例は稀と考えここに報告する.

Key words 胃癌／胃底腺型胃癌／低異型度高分化型腺癌／微小／長期経過観察／NBI

I 緒 言

胃底腺への分化を示す胃癌は, 2007年にTsukamotoら[1]により初めて報告され, 2010年にUeyamaら[2]により胃底腺型胃癌（主細胞優位型）という名称で新しい概念として提唱された. "胃底腺型胃癌" "gastric adenocarcinoma of fundic gland type" "chief cell differentiation" "chief cell predominant type"をキーワードにPubMed（1966年から2015年2月）, 医学中央雑誌（1983年から2015年2月）において検索し得た論文は31編あり, 症例総数は125例であった. その中で, 5mm以下の微小病変は15例[2)~5)]であり, 3mm以下は5例[3),4)]であった. また, NBI併用拡大観察などの内視鏡的詳細観察された報告は5編[1)~3),6)~8)]あり, 長期経過を追えた症例は1例[3)]のみであった.

胃底腺型胃癌の組織発生, 生物学的悪性度, 臨床病理学的検討については, 不明な点が多く, 初期病変の詳細な検討は重要であると考え本症例をここに報告する.

Gastroenterol Endosc 2015 : 57 : 2639-46.
Yoshiaki ISONO
Long-term Follow-up of a Gastric Adenocarcinoma of the Fundic Gland Type : A Case Report.

別刷請求先：〒513-8630 鈴鹿市安塚町山之花1275-53
鈴鹿中央総合病院 消化器内科 磯野功明

II 症 例

患者：57歳女性.

主訴：検診異常.

既往歴：7年前, 早期胃癌（M, Post, 26×25mm（ESD材料）, Type 0-IIc, 7×8mm, tub2, pT1a, ul(+), ly0, v0, pHM0, pVM0）.

現病歴：7年前に, 上部内視鏡検査において, 胃体下部後壁に糜爛を伴う発赤陥凹性病変として指摘された早期胃癌に対しESDが施行された. 病変背景は萎縮性胃炎であり, 木村・竹本分類[15)]におけるO-1であった. この際, 迅速ウレアーゼ試験, 鏡検法において, *H.pylori*陽性であったため, 6年前に除菌治療が行われた. 除菌後, 尿素呼気試験において*H.pylori*陰性が確認された. 4年前の上部内視鏡検査で, 胃体下部大彎前壁に3mmの白色粘膜領域が指摘され, 鉗子生検が施行