

4-1-1993

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### Recommended Citation

Sriratanaban, AJnnach and Deesomchok, Utis (1993) "Peptic ulcer and strongyloidiasis in patients with systemic lupus erythematosus on corticosteroid therapy," *Chulalongkorn Medical Journal*: Vol. 37: Iss. 4, Article 3.

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## Peptic ulcer and strongyloidiasis in patients with systemic lupus erythematosus on corticosteroid therapy.\*

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Sriratanaban A, Deesomchok U. Peptic ulcer and strongyloidiasis in patients with systemic lupus erythematosus on corticosteroid therapy. Chula Med J 1993 Apr ; 37 (4) : 237-240

*The purpose of this study is to evaluate whether upper gastrointestinal endoscopy could be useful for screening peptic ulcer and strongyloidiasis, two of the potential side-effects of long-term corticosteroid therapy, in patients with systemic lupus erythematosus (SLE). Eighty-nine patients with SLE were studied. Eighty-six were taking prednisone or prednisolone at an average dose of 27 mg/day for an average duration of 45 months. Endoscopy revealed no case of peptic ulcer. Duodenal aspiration done through the endoscope found one case of strongyloidiasis. However, out of 84 patients who submitted stool samples, stool examination showed nine cases (10.7%) of strongyloidiasis, including the patient detected by duodenal aspirate.*

*It was concluded that routine use of upper gastrointestinal endoscopy in patients with SLE on long-term corticosteroid was not useful in detecting peptic ulcer or strongyloidiasis. However, stool examination for strongyloid should be mandatory in these patients, at least in Thailand where strongyloidiasis is common.*

**Key words :** Peptic ulcer, Strongyloidiasis, Systemic lupus erythematosus, Corticosteroid.

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Received for publication. January 11, 1993.

\* Presented at the annual meeting of the Royal College of Physicians of Thailand, Cha-am District, Phetchaburi Province, Thailand, April 20, 1990.

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อำนาจ ศรีรัตนบัลล์, อุทิศ ดิสมโชค, แผลเป็บติกและพยาธิสตรองจิลอยด์ในผู้ป่วยโรคซิสเต็มมิก ลูปัส เอริเทมาโตซัส ที่ได้รับยากอติโคสเตอรอยด์. จุฬาลงกรณ์เวชสาร 2536 เมษายน ; 37 (4) : 237-240

ผู้ป่วยที่เป็นโรค Systemic lupus erythematosus (SLE) ส่วนใหญ่จะได้รับการรักษาด้วยยากอติโคสเตอรอยด์เป็นเวลานาน ผู้ป่วยเหล่านี้อาจเกิดภาวะแทรกซ้อนได้จากยานี้ แผลเป็บติกและพยาธิสตรองจิลอยด์เป็นภาวะแทรกซ้อนสองประการที่อาจตรวจพบได้ด้วยการใช้กล้องส่องตรวจทางเดินอาหารส่วนต้น รายงานนี้เป็นผลการศึกษาเพื่อประเมินประโยชน์ของการตรวจดังกล่าว ผู้ป่วย SLE จำนวน 89 รายเข้าร่วมในการศึกษานี้ เป็นผู้ป่วยที่กำลังได้รับยากอติโคสเตอรอยด์จำนวน 86 รายโดยได้รับยาเพรดนิโซนหรือเพรดนิโซโลนในขนาดเฉลี่ย 27 มิลลิกรัมต่อวัน เป็นระยะเวลาเฉลี่ย 45 เดือน การตรวจด้วยการใช้กล้องส่องไม่พบผู้ป่วยมีแผลเป็บติก และการดูดผนังดูโอดีนัมโดยผ่านทางกล้องส่องเพื่อตรวจหาพยาธิสตรองจิลอยด์พบพยาธิในผู้ป่วย 1 ราย ผลการตรวจอุจจาระผู้ป่วยพบพยาธิสตรองจิลอยด์ 9 รายจากผู้ป่วยที่ส่งอุจจาระมาตรวจ 84 ราย (ร้อยละ 10.7) รวมทั้งผู้ป่วยที่ตรวจพบจากการดูดผนังดูโอดีนัมด้วย สรุปผลการศึกษาครั้งนี้ได้ว่า การใช้กล้องส่องตรวจทางเดินอาหารส่วนต้นแก่ผู้ป่วยโรค SLE ที่ได้รับยากอติโคสเตอรอยด์ทุกรายโดยไม่มีข้อบ่งชี้โดยเฉพาะไม่มีประโยชน์ แต่การตรวจอุจจาระเพื่อหาพยาธิสตรองจิลอยด์เป็นระยะๆ น่าจะถือว่าเป็นการตรวจที่ต้องทำ

Most patients with systemic lupus erythematosus (SLE) are treated with corticosteroids. Among the side-effects of long-term corticosteroid therapy are peptic ulcer<sup>(1,2)</sup> and strongyloidiasis.<sup>(3)</sup> The purpose of this study is to evaluate the role of routine upper gastrointestinal endoscopy in screening for these two side-effects in patients with SLE who might be asymptomatic.

### Materials and Methods

Subjects for this study were all patients diagnosed with SLE who were under treatment at the Rheumatology Clinic, Chulalongkorn Hospital. They were advised of the potential benefits of the study. Those who agreed to participate were given an appointment for endoscopy done exclusively by the first author, and to bring a stool sample for examination.

Data collected included the current dosage of corticosteroid, and duration of therapy, and gastrointestinal symptoms : abdominal pain, anoxia, nausea, vomiting and diarrhea.

The routine endoscopy was supplemented with duodenal aspiration. Endoscopic catheter regularly used for water injection was used for this purpose. The tip of the aspiration catheter was positioned at the lower end of the second part of the duodenum and slowly withdrawn while negative pressure was maintained by suctioning with a 10-ml syringe. The process was repeated four times. The contents were then flushed out forcefully with air onto a glass slide and immediately examined by the first author for parasites. This procedure was used successfully by the author in diagnosing a case of strongyloidiasis in whom repeated stool examinations were negative.<sup>(4)</sup>

Stool examination was done by the routine

laboratory which included examination by concentration technic.

### Results

The study was carried out from January 19, 1988 to January 28, 1989. All 89 Consecutive patients who were approached agreed to participate in the study. Eighty-six of the 89 patients were taking corticosteroid. The average dosage was 27 mg (S.D. = 21) of prednisone or prednisolone per day for an average duration of 45 months (S.D. = 35)

Upper gastrointestinal endoscopy revealed no instance of peptic ulcer. Four cases of antral gastritis were recorded, only one of which had the symptom of abdominal pain and none was taking non-steroidal anti-inflammatory drug. Duodenal aspirate was positive for strongyloid in one patient who had no gastrointestinal symptom.

Eighty-four patients submitted stool samples for examination which showed the following :

Strongyloid stercolaris in nine of the patients, including the one found by duodenal aspiration.

Hookworm in two, patients one of whom had strongyloid.

Opisthorchis viverrini in two patients, one of whom had strongyloid as well as giardia lamblia.

Giardia lamblia in one patient, as mentioned above.

The nine patients with strongyloidiasis, when compared with those without with regard to dosage and duration of corticosteroid therapy and gastrointestinal symptoms, showed no significant difference. Details are shown in the Table

**Table.** Comparison of patients with and without strongyloidiasis.

	With Strongyloidiasis n = 9	Without Strongyloidiasis n = 77	Total n = 86
Prednisolone			
Daily dose, mg	38	26	27
Duration, months	49	45	45
Abdominal pain, n	5	13	18
Dyspepsia *, n	2	4	6
Anorexia, n	1	0	1
Nausea, n	1	3	4
Vomiting, n	1	4	5
Diarrhea, n	1	8	9

\* defined as having epigastric pain continuously or intermittently for at least four weeks

## Discussion

Corticosteroids have been reported, and are commonly assumed, to increase the incidence of peptic ulcer.<sup>(1,2)</sup> but, this topic is still controversial.<sup>(2)</sup> Our study does not indicate that peptic ulcer is a significant side-effect of corticosteroid therapy in patients with SLE. However, it does show that strongyloidiasis, found in 9 out of 84 patients (10.7%), is a potential threat in these patients. Leelarasamee et al,<sup>(3)</sup> had previously shown that patients with chronic renal diseases (including SLE) on corticosteroids had a high incidence of strongyloidiasis, i.e. 7 percent by simple smear examination. The same group of authors also reported cases of disseminated strongyloidiasis,<sup>(5,6)</sup> five of the nine reported cases were patients with SLE on corticosteroid therapy and all of them ended fatally. It is, therefore, mandatory for all patients with SLE on corticosteroids to undergo periodic stool examination for strongyloid.

Our study, however, fails to support the important role of duodenal aspirate in the diagnosis of strongyloidiasis,<sup>(7)</sup> being positive in only one of the nine cases (11%) found by stool examination. The endoscopic technique described could be inferior to the traditional methods of duodenal drainage which were reported to show positive results in 38.6% to 58.1% of cases.<sup>(7)</sup> However, this technique was successful at least in diagnosing one previous case of strongyloidiasis in whom repeated stool examinations were negative.<sup>(4)</sup> The procedure, either traditional or endoscopic, should be reserved for symptomatic cases where the diagnosis is suspected, but stool examination is negative.

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