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## SMA Syndrome after Corrective Surgery of Thoracic Kyphoscoliosis -A Case Report-

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### - Abstract -

Superior mesenteric artery (SMA) syndrome is a rare condition that results from an extrinsic compression of the third portion of the duodenum, between the SMA and the aorta. The symptoms for the condition consist of abdominal pain and recurrent vomiting, caused by ileus, and can be followed by an electrolyte imbalance and nutrient deficiency. SMA syndrome can follow surgical correction of a spinal deformity, as the aorta migrates forward as the degree of the lumbar lordosis increases, and the retroperitoneal fat tissue decreases, during perioperative abstinence. Any symptoms suggestive of SMA syndrome, after correction of a spinal deformity, should be investigated, as SMA syndrome carries a prolonged hospital stay, with the potential for mortality. An 11 year 10 month old boy, who underwent correction for thoracic kyphoscoliosis, developed postoperative abdominal distension, pain and bilious vomiting. An upper gastrointestinal contrast study revealed SMA syndrome, which required a laparotomy.

**Key Words:** SMA syndrome, Kyphoscoliosis

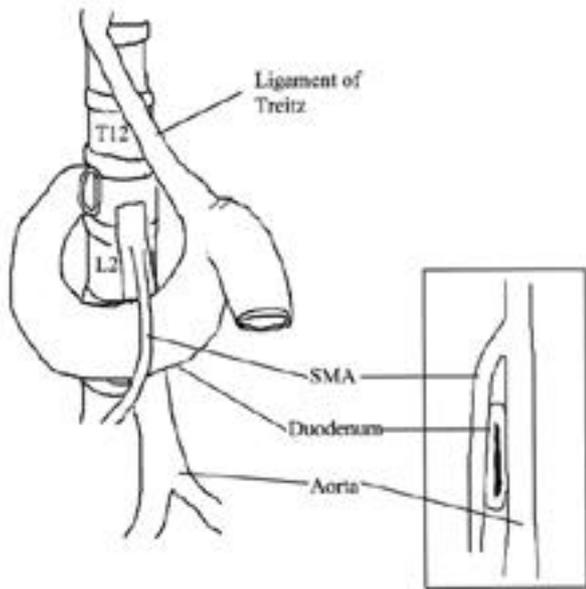
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(Fig. 1). 가

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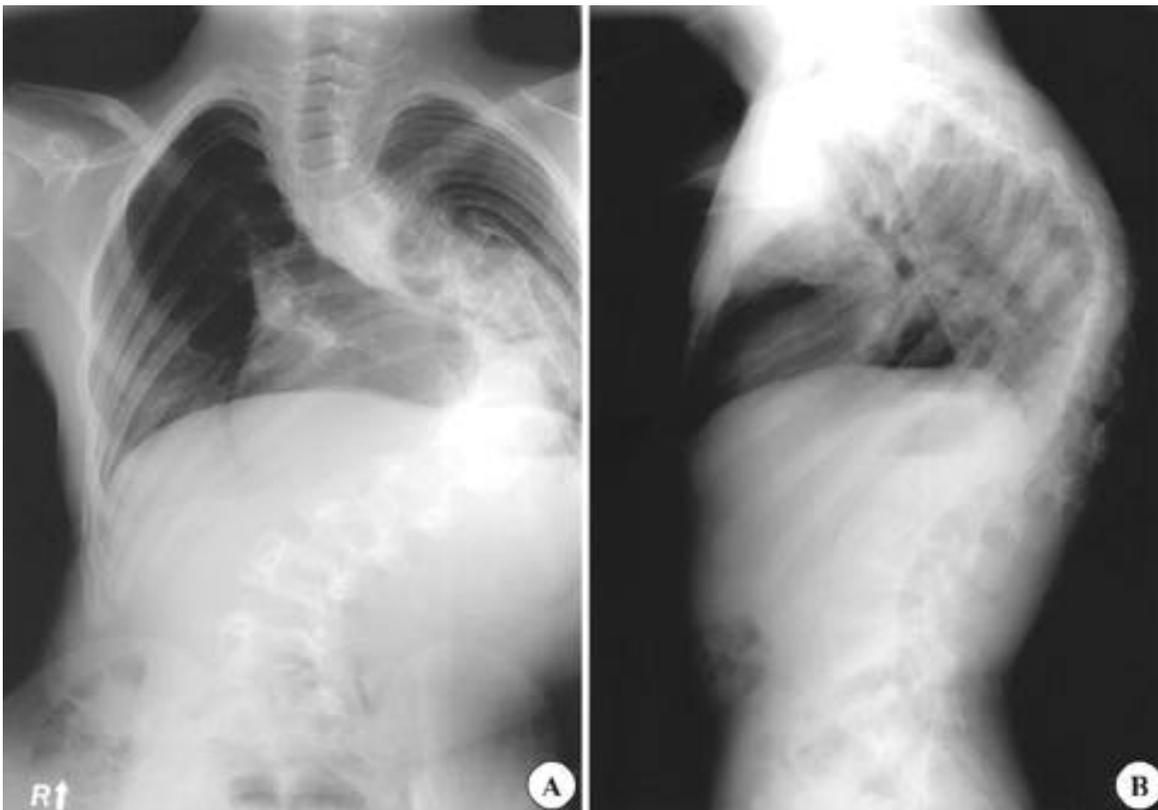
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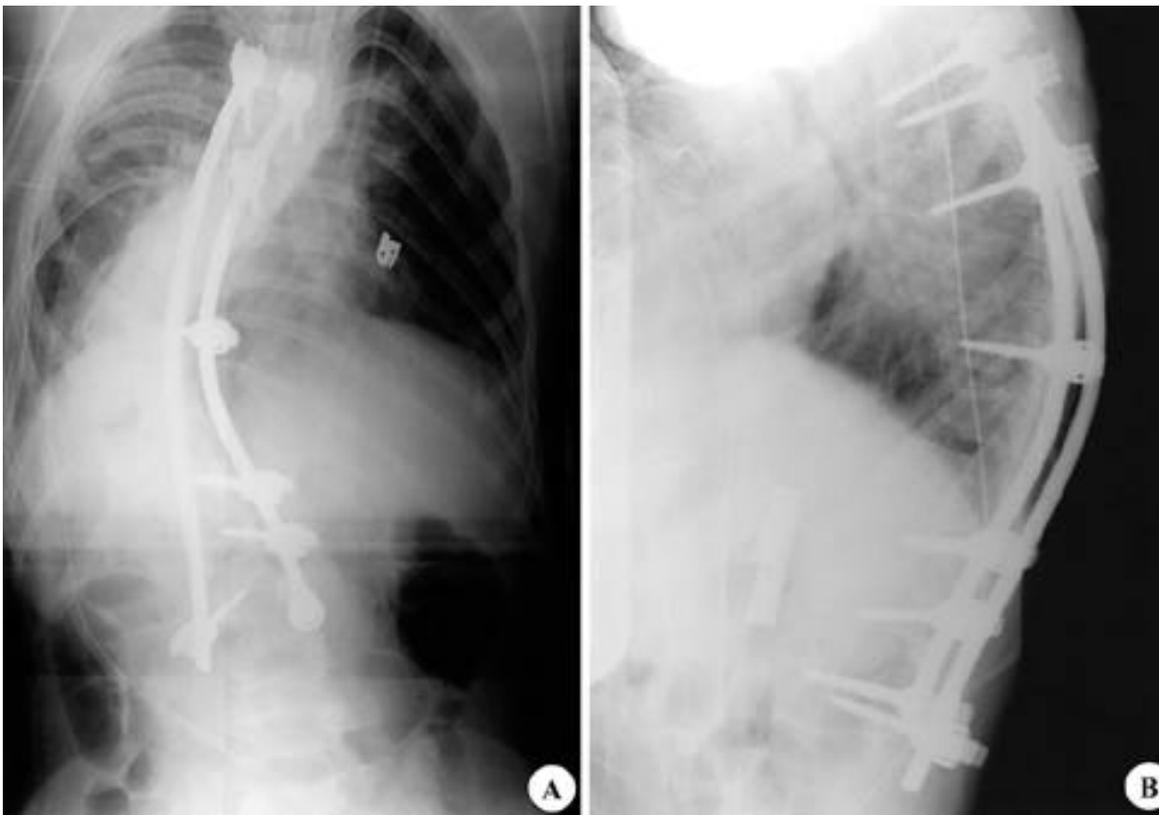


**Fig. 1.** Diagrammatic representation of superior mesenteric artery syndrome

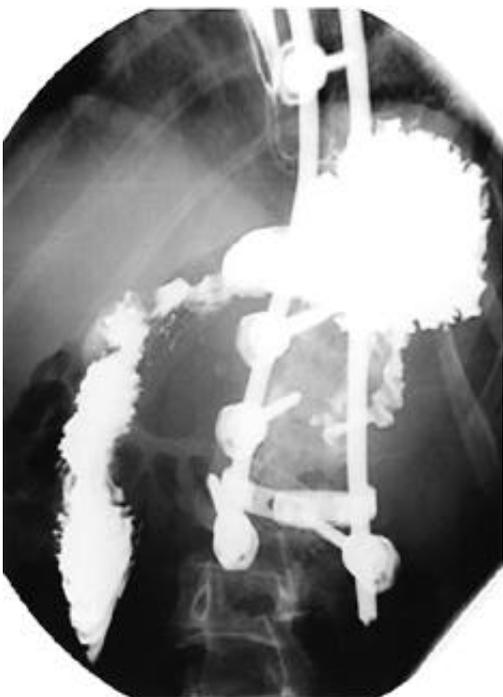
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 , MRI  
 Cobb 107° , 79°



**Fig. 2.** 11+10-year-old male. Thoracic kyphoscoliosis. Preoperative standing anteroposterior (A) and lateral (B) radiographs.



**Fig. 3.** Postoperative anteroposterior (A) and lateral (B) radiographs following anteroposterior fusion from T5 to L3.



**Fig. 4.** Upper gastrointestinal contrast study at postoperative 7th days. It shows a cutoff at the junction of the second and the third part of the duodenum representing extrinsic compression by the superior mesenteric artery.



**Fig. 5.** Upper gastrointestinal contrast study at postoperative 23th days, following 11days of total parenteral nutrition treatment. It shows no remarkable change since last study.

(Fig. 2).

5 - 3

47°

Cobb 50°

(Fig. 3).

24

3 가

24

<sup>13)</sup>

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7

Shah Moreland<sup>12)</sup>

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2

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2 standard deviation

(Fig. 4)

31.45 kg

Zein <sup>18)</sup>

36.3 kg

2

가

1

(Fig. 5).

26

50%

8

,48

<sup>6)</sup>

3

3

가

<sup>8)</sup>

<sup>13)</sup>

1752 Boerneius가

<sup>9)</sup>

<sup>5)</sup>

cast <sup>6)</sup>, Wilkie obstruction<sup>14)</sup>,

<sup>1)</sup>, arteriomesenteric duodenal

<sup>17)</sup>

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Hutchinson Bassett<sup>7)</sup> 5

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, Munns <sup>11)</sup>

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