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## BACKGROUND

Graves disease is the most common cause of hyperthyroidism in children. The frequency of the disease increases with age, peaking during adolescence.

Thyroid storm is a rare but critical, illness that can lead to multiorgan failure and carries a high death rate.

Antithyroid drugs are usually recommended as the initial treatment and are generally well tolerated.

Although current treatment options include radioactive iodine, but long term complications of thyroid irradiation is not well known.

Near total or total thyroidectomy is an acceptable form of therapy too.

Reactions to antithyroid drug medication makes the decision harder for choosing the suitable therapeutic option.

## CASE

A 10 years old girl administrated to our outpatient clinic with palpitation, tremor, anxiety, sleepless, weight loss and fatigue. She was administered to another center with thyroid storm and diagnosed as Graves disease. The antithyroid drug therapy (methimazole and propranolol) was initiated to patient but she had angioneurotic edema. Following either propranolol or methimazole administration alone resulted with angioneurotic edema. In this situation the patient was referred to our clinic for radioactive iodine ablation therapy. Physical examination and laboratory findings were given at Table 1.

Table 1 Physical examination and laboratory findings

Laboratory findings	Our Patient Initial Values	After High Dose Oral Glucocorticoid and Antihistaminic Therapy Values	Postoperative Values
Physical examination	Height: 137,3 cm (HSDS:-1,3) Weight: 29,5 (BMI: 15,7) Heart rate: 125/minute Goiter and tremor		Height: 139 cm (HSDS:-1,2) Weight: 31 (BMI: 16,06) Heart rate: 75/minute
Free T3	36,31 pmol/L (3,8-6 pmol/L)	6,02 pmol/L	3,8 pmol/L
Free T4	71,5 pmol/L (7-16 pmol/L)	21,96 pmol/L	15,36 pmol/L
TSH	0,02mIU/ml(0.34–5.6 mIU/ml)		
TRAb	405 U/L (0-9 U/L)		
Thyroglobulin Ab	311,1 IU/ml(negative)		
TPO Ab	221,4 IU/ml (negative)		
Liver Functions	AST:18 U/L (<41) ALT:17 U/L (<34)		
Thyroid Color Doppler Ultrasonography	Thyroid volume: 14,1 ml (>+2 SD) Parenchyma in heterogeneous appearance, increased thyroid blood flow	Thyroid volume: 12,36 ml (>+2 SD) Parenchyma in heterogeneous appearance.	
Thyroid Scintigraphy	Thyroid uptake above the normal limit (4 <sup>th</sup> hour: 62.4%; 24 <sup>th</sup> hour 54.6%)		

Under this circumstances thyroid ablation with <sup>131</sup>I seems to be a good solution but her iodine turnover was very high (4<sup>th</sup> hour: 62.4%; 24<sup>th</sup> hour 54.6%) and so the response will be poor and needs to be administered with higher recurrent doses. Plasmapheresis could be another option in preparation for total thyroidectomy but it was risky. High dose oral glucocorticoid and antihistaminic therapy combined with propranolol was administered before surgery. Her thyroid hormone levels were decreased %70 in a week and total thyroidectomy was performed without any complication Postoperation period LT4 therapy was initiated.

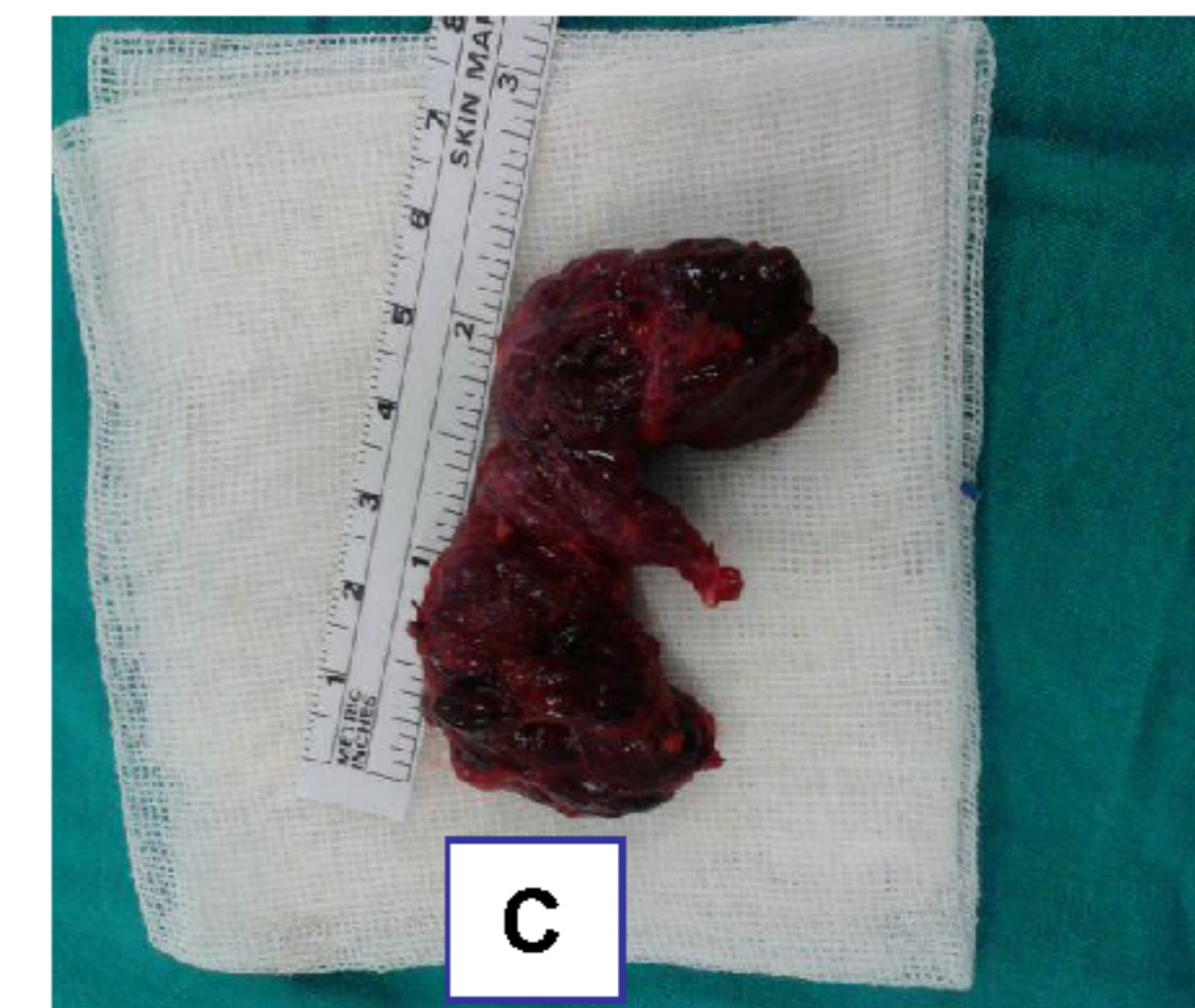
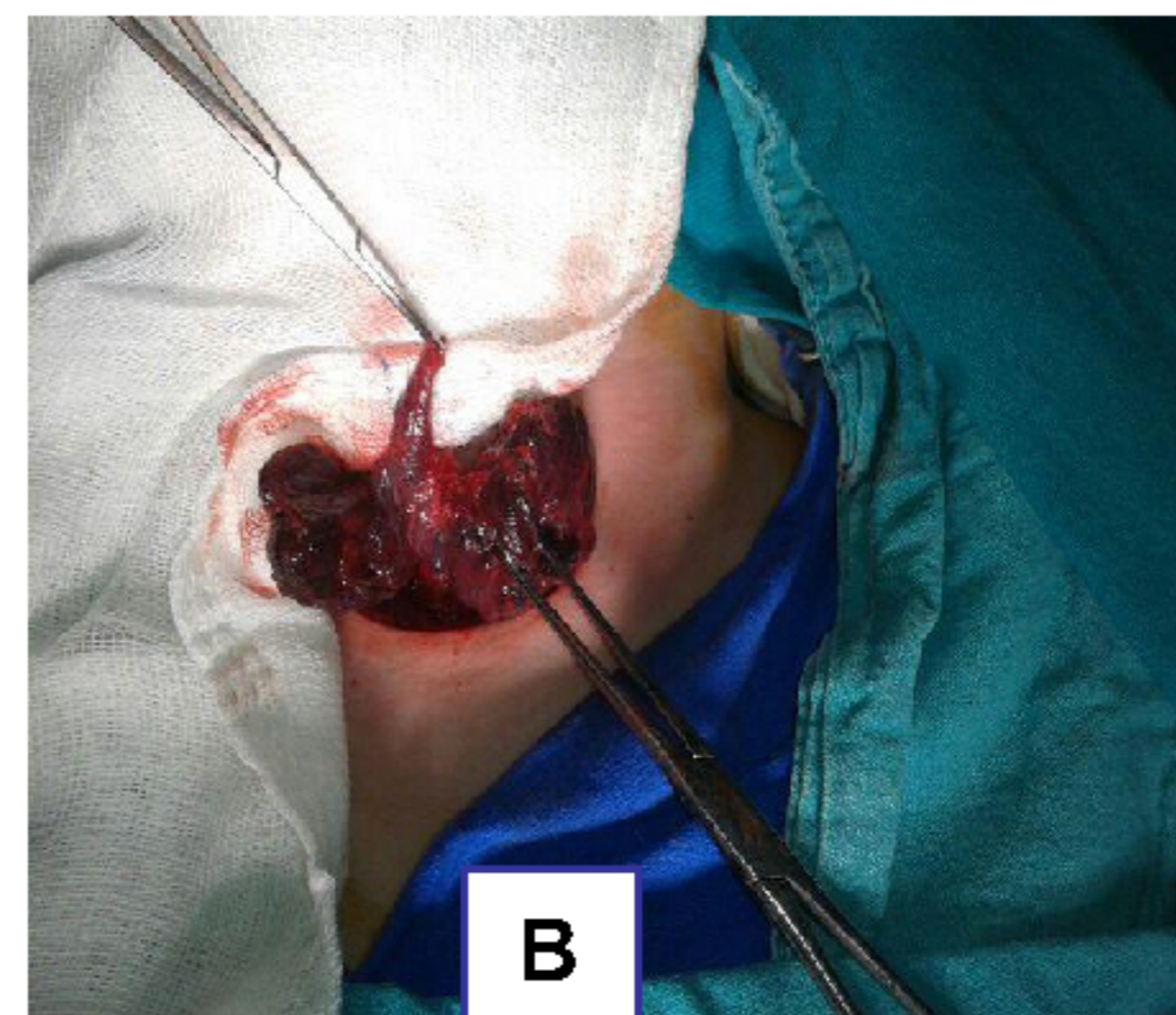
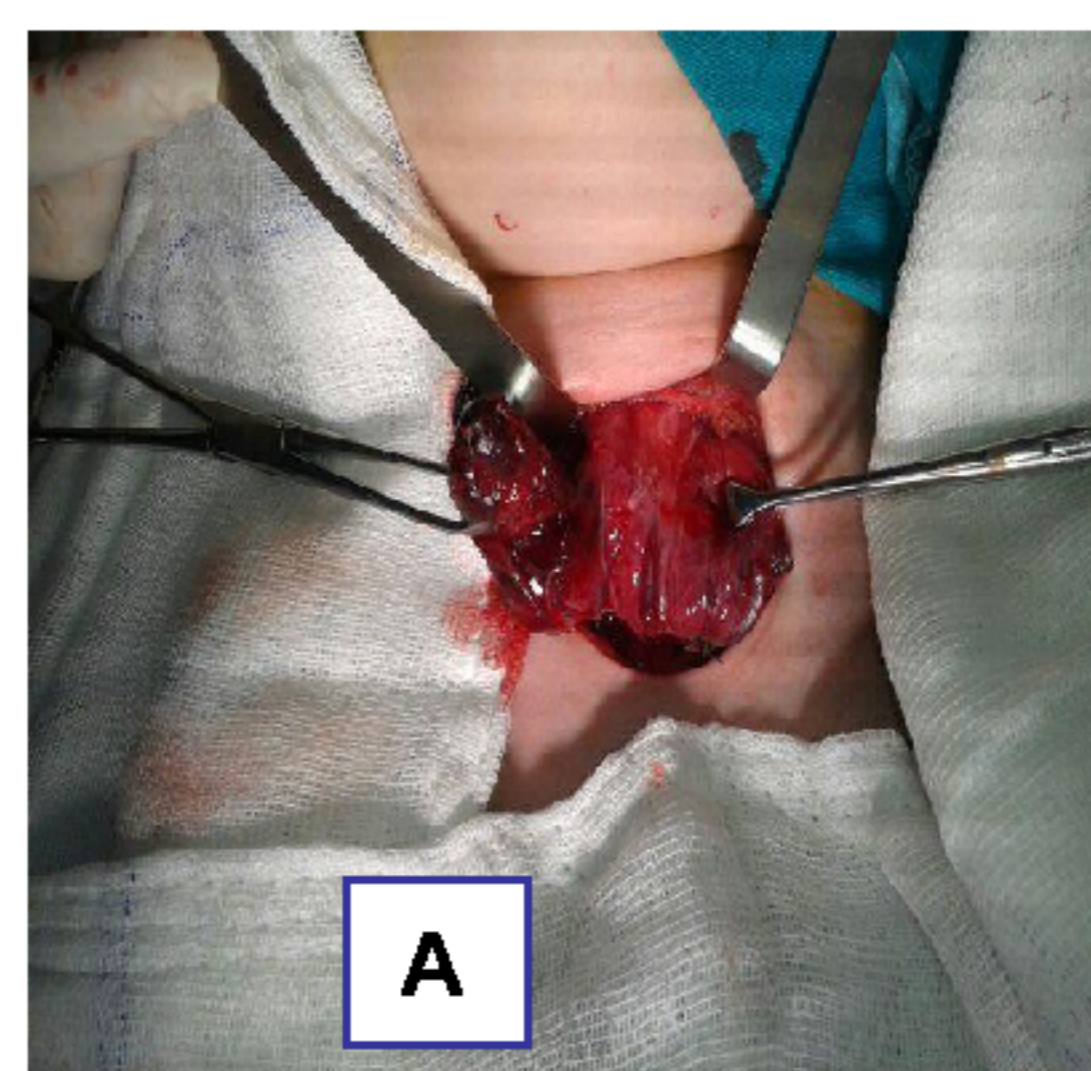


Figure 1 A,B,C Surgical Photos

## CONCLUSION

❖In conclusion in order to underline allergic reactions of antithyroid therapy, we wanted to remind oral steroid therapy benefits combined with surgery.