**Table 8 shows comparative summary across three cases of pituitary-related disorders associated with thyroid dysfunction**

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| **Feature** | **Case 1** | **Case 2** | **Case 3** |
| **Age/Gender** | 24-year-old female | 22-year-old female | 37-year-old male |
| **Presenting Symptoms** | Galactorrhea, menstrual irregularities, weight gain, polyuria, headache | Headache, vomiting, amenorrhea, body aches | Palpitations, weight loss, fatigue, tremors |
| **Initial Lab Findings** | Elevated TSH, low Free T4, high prolactin | Elevated TSH, normal other pituitary hormones | Elevated TSH, high FT4 and FT3 |
| **MRI Findings** | Pituitary macroadenoma, 11x16x14 mm | Bulky pituitary, small lesion 7x6x5 mm | Sellar mass, 9x12 mm |
| **Final Diagnosis** | Pituitary hyperplasia secondary to hypothyroidism | Pituitary adenoma and hyperplasia due to hypothyroidism | TSH-secreting adenoma (TSHoma) |
| **Treatment** | Levothyroxine 100 mcg daily | Levothyroxine (increased to 200 mcg with reinforcement of compliance) | Octreotide (ineffective), carbimazole, trans-sphenoidal surgery |
| **Outcome** | Symptom resolution, no need for surgery | Partial reduction in adenoma size with symptomatic improvement | Post-surgery normalization of TSH, FT4, FT3 levels |
| **Learning Points** | Importance of lab evaluation before imaging | Compliance with thyroxine essential in managing symptoms | Need for early diagnosis and surgical intervention in TSHoma |