Benign Vascular Tumours

			
Disease	Infantile Hemangioma	Congenital Hemangioma	Pyogenic Granuloma
Presentation	Most common vascular tumor of infancy Divides in <u>three types</u>: **1. Superficial** Superficial dermal mass, compressible, with smooth or finely lobulated texture, bright red with telangiectasia on the surface. Changes to a purple-red or gray colour during involution. **2. Deep** Nodular mass of the deep dermis and subcutaneous tissue, with a soft, warm, poorly defined texture and a light blue-purple colour. **3. Combined** Combination of superficial and deep i.e. poorly circumscribed bluish nodule surmounted by a well-defined bright red plaque.	Rare, benign vascular tumors that proliferate in utero and are fully developed at birth. Usually presents as a single, well-limited, reddish-purple mass with telangiectasia on the surface. Divides in <u>three types</u>: **1. Rapidly involuting congenital hemangioma (RICH)** Regresses on its own typically within the first year of life; often resembles an elevated mass. **2. Noninvoluting congenital hemangioma (NICH)** Remains stable and develops as the child grows; usually forms a flat patch or macule. **3. Partially invasive congenital hemangioma (PICH)** Incompletely regresses to then stabilizes; initially resembles a RICH but undergoes partial involution within the first 12 months of life.	Smooth, vascular red nodule with distinct keratinised borders, typically 5-10 mm in diameter, growing rapidly over a few weeks. Surface tends to be friable and to ulcerate, bleed or become crusty or verrucous. Usually a solitary nodule, but multiple nodules and satellite lesions with white “rail lines” may appear.

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Benign Vascular Tumours Continued

Disease	Infantile Hemangioma	Congenital Hemangioma	Pyogenic Granuloma
Location	Can be found anywhere on the body, but most commonly found on the head and neck.	Can be found anywhere on the body.	Can be found anywhere on the body, including mucous membranes.
Complications	• **Periocular involvement:** risk of astigmatism, amblyopia, strabismus. • **Tip of nose or lips involvement:** risk of deformation and ulceration. • **Lower face involvement:** may be associated with airway hemangioma or PHACES syndrome. • **Extensive lower body involvement:** may be associated with LUMBAR syndrome. • **Extensive perineum involvement :** may be associated with PELVIS syndrome. • **Multiple infantile hemangiomas (≥5) :** risk of visceral hemangiomatosis.	Depending on the hemangioma location, some complications include heart failure, ulceration, hemorrhage, disfiguration.	Bleeding may be profuse and frequent in cases of minor trauma, leading to anemia. In rare cases, oral pyogenic granuloma can cause significant bone loss.
Onset	Generally absent at birth; around 50% of cases have a discrete precursor lesion (macule, telangiectatic patch). Postnatal proliferation for 6-9 months.	Present at birth; some cases are visible in-utero, mostly during the 3rd trimester.	Commonly occurs in children over 6 years of age, adolescents and young adults. Predominantly affects males, with the exception of oral lesions that are associated with pregnancy (granuloma gravidarum) and use of oral contraceptives.

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Benign Vascular Tumours Continued

Disease	Infantile Hemangioma	Congenital Hemangioma	Pyogenic Granuloma
Causes	A placental origin is suggested due to GLUT1 protein expression.	The causes of congenital haemangiomas remains unclear, and factors determining evolution is unknown ; in contrast with infantile hemangiomas, GLUT1 staining is negative.	Factors associated with the occurrence of pyogenic granuloma may include: • **Trauma :** minor trauma, chronic minor irritation in the oral cavity, piercings • **Hormonal influences** (oral contraceptives and pregnancies) • **Medications:** oral retinoids, protease inhibitors, targeted cancer therapies, immunosuppressants, and oral contraceptives • **Infections :** poor dental hygiene, *S. aureus* infections
Treatments	• **Topical:** timolol • **Oral:** propranolol for hemangiomas affecting vital functions (e.g., vision) or at high risk of disfiguration, ulceration, or heart failure • **Invasive measures:** laser, surgical excision and plastic surgery	Surgical excision may be considered for aesthetic concerns, pain or bleeding, and for hemangiomas causing functional organ compromise.	• Curettage and cautery, surgical excision, vascular and ablative lasers • Topical timolol • Cryotherapy • 5% Imiquimod cream **Prevention:** • Ceasing drug triggers • Oral hygiene • Piercing removal
Additional images			

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Benign Vascular Tumors (Continued)

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