

**Supplementary table 1: Overview of cases in literature (chronological order)**

Case (ref)	gender	age	etiology	Uni/bilateral	CST yes/no	orbital symptoms	treatment	anticoagulation	Outcome
1 <sup>1</sup>	f	32	Autoimmune hemolytic anemia	unilateral	no	proptosis, chemosis	methylprednisolon	no	complete recovery
2 <sup>2</sup>	f	54	Graves' orbitopathy	unilateral	no	bilateral proptosis, limited eye movements, normal visus (20/20 both sides), no RAPD	methylprednisolone, orbital decompression chirurgie	no	immediately postop; better eyemovements. No follow up
3 <sup>3</sup>		88	Sphenoidal sinusitis	unilateral	no	chemosis, oedema, visual acuity 20/30 Left eye	antibiotic treatment, sphenoidectomy	no	complete recovery
4 <sup>4</sup>	f	61	orbital cellulitis and pansinusitis	unilateral	no	unilateral loss of vision, edema, chemosis, limited eye movements	endoscopic sinus surgery, orbital decompression, antibiotic, anticoagulation therapy	yes	No light perception
5 <sup>5</sup>	f	47	ulcerative colitis	unilateral	no	unilateral loss of vision, edema, chemosis, proptosis	corticosteroids, anticoagulation therapy, Infliximab (for ulcerative colitis)	yes	No light perception
6 <sup>6</sup>	f	60	systemic lupus erythematosus	unilateral	no	unilateral loss of vision	steroids, cyclofosfamid, anticoagulation therapy	yes; warfarin/heparin	complete recovery
7 <sup>6</sup>	f	25	facial cellulitis	bilateral	yes	periocular edema	antibiotics, anticoagulation therapy	yes, heparine	died
8 <sup>7</sup>	m	77	Severe facial trauma (Le fort III fracture)	unilateral	no	chemosis	anticoagulation therapy	yes	complete recovery
9 <sup>8</sup>	f	68	systemic lupus erythematosus	bilateral SOVT	no	decreased vision, periorbital edema	steroids, anticoagulant treatment	yes, heparin	edema and vision improved (not specified)
10 <sup>9</sup>	f	78	Graves ophthalmopathy	unilateral SOVT	no	proptosis, cystoid macular edema	prophylactic daily aspirin, dorzolamide/timolol eyedrops	yes aspirin	no information
11 <sup>10</sup>	m	20	Ethmoidal sinusitis	bilateral SOVT	no	proptosis, edema, restricted eye movements, visus 20/30 both sides	antibiotics, anticoagulation therapy	yes, heparine	no follow up
12 <sup>11</sup>	f	77	Anti-phospholipid syndrome (new diagnosis revealed by haematological work-up)	bilateral SOVT	no	proptosis, conjunctival injection and optic disc swelling	anticoagulant treatment	yes (warfarin)	complete recovery

13 <sup>12</sup>	m	2	trauma with midfacial and orbital fractures	unilateral SOVT	no	severe prolapsing chemosis and proptosis	Polysporin ointment	no	mild ptosis, normal vision
14 <sup>13</sup>	f	58	sickle trait	unilateral SOVT	no	diplopia and orbital pain. Proptosis	anticoagulant treatment	yes (warfarin)	complete recovery
15 <sup>13</sup>	<b>m</b>	77	hereditary hemorrhagic telangiectasia (HHT)	unilateral SOVT	no	blurred vision, and diplopia, proptosis, verminderde beweeglijkheid alle bewegingen.	no anticoagulation due to increased risk of hemorrhage (HHT)	no	complete recovery
16 <sup>13</sup>	m	42	cessation of anticoagulation therapy (warfarin) for history of deep vein thromboses	unilateral SOVT	no	visual loss ( no light perception), chemosis, proptosis, ophthalmoplegia	decompression surgery, anticoagulation therapy	yes (heparin)	No light perception
17 <sup>14</sup>	m	53	no information	unilateral SOVT	no	proptosis, eyelid edema, poorly reactive pupil.	antibiotics	no	complete recovery
18 <sup>15</sup>	m	59	SOVT in CST tgv masticator space abscess	unilateral SOVT	yes	reduced vision (20/60), proptosis	antibiotics, anticoagulant therapy	yes (heparin)	complete recovery
19 <sup>16</sup>	m	0,8	Idiopathic	unilateral SOVT	no	unilateral red, swollen, and droopy eyelid	low-dose aspirin (1 month)	yes aspirin	mild ptosis, normal vision
20 <sup>17</sup>	f	33	Sphenoid sinusitis	unilateral SOVT	yes	chemosis, periorbital edema, and proptosis	endoscopic sinus surgery, antibiotics, anticoagulant treatment	yes (heparin)	complete recovery
21 <sup>18</sup>	f	65	orbital cellulitis and ethmoidal sinusitis	unilateral SOVT	no	proptosis and chemosis, limited visual acuity (20/40)	antibiotics, anticoagulant therapy	yes (heparin)	recovery of vision and proptosis
22 <sup>19</sup>	m	69	Adenoid cystic carcinoma of the nasal mucosa	unilateral SOVT	no	visual acuity 20/400 (right side), RAPD, proptosis, limited eye movements	antibiotics, anticoagulant therapy, surgical tumor removal, radiotherapy	yes aspirin	no information
23 <sup>20</sup>	m	41	antiphospholipid syndrome (new diagnosis revealed by haematological work-up)	unilateral SOVT	no	eyelid swelling, chemosis, restricted eye movements, proptosis.	methylprednisolone, anticoagulation therapy	yes (dalteparin)	complete recovery
24 <sup>21</sup>	f	62	Embolization dural arteriovenous fistula	unilateral SOVT	yes	limited visual acuity, proptosis, edema,	antibiotics, anticoagulant therapy	yes (heparin)	No light perception
25 <sup>22</sup>	m	65	facial cellulitis and orbital cellulitis	unilateral	no	severe edema of his bilateral eyelid and lower conjunctiva	intravenous antibiotics, Anticoagulation and oral steroid treatment	yes (heparin)	No light perception
26 <sup>23</sup>	m	2	trauma	unilateral	no	periorbital swelling, chemosis	surgical placemnt of traction band in the superior fornix	no	mild ptosis, normal vision

27 <sup>24</sup>	m	3	Lemierre syndrome/otomastoiditis	unilateral	yes	periorbital edema	antibiotics, anticoagulant therapy	yes (heparin)	Abducens nerve palsy
28 <sup>25</sup>	f	45	left cavernous sinus meningioma	unilateral SOVT	no	progressive proptosis	craniotomy with excision of the tumor and thrombus	no	no information
29 <sup>26</sup>	f	64	dental infection/septic cavernous sinus thrombosis	bilateral	yes	ophthalmoplegia, chemosis, proptosis, no light perception right eye, 1/60 left eye	antibiotics	no	died
30 <sup>26</sup>	f	52	Embolisation of carotico-cavernous fistula	unilateral	no	left axial proptosis, chemosis and conjunctival congestion. Vision (0,5/200)	steroids, anticoagulant treatment	yes (heparin)	vision 2/200
31 <sup>27</sup>	m	71	chronic myeloid leukemia, receiving antifibrinolytic and thrombopoietin receptor agonist medications	unilateral	no	visual loss, RAPD, proptosis, ophthalmoplegia	anticoagulation therapy	yes (heparin)	persistent complete loss of vision
32 <sup>28</sup>	m	14	Paranasal sinusitis with SOVT and CST (ER diagnosis: orbital cellulitis)	unilateral	yes	proptosis, normal visual acuity, limited abduction	antibiotics	no	no follow up
33 <sup>29</sup>	f	51	dental infection and orbital abscess	unilateral	yes	proptosis, chemosis, ophthalmoplegia, vusus 20/20.	antibiotics, steroids, anticoagulant therapy , orbital abscess drainage, dental extraction	yes (heparin)	n. abducens palsy
34 <sup>30</sup>	f	16	Nasal furunculosis	bilateral	yes	bilateral orbital swelling, proptosis, chemosis, restricted eye movements	antibiotics and anticoagulation therapy	yes (heparin)	complete recovery
35 <sup>31</sup>	m	43	dental infection, orbital cellulitis	unilateral	no	proptosis, visual acuity; light perception	antibiotics, steroids, anticoagulant therapy , surgery (dental extraction)	yes (heparin)	light perception/permanent vision loss
36 <sup>32</sup>	f	59	Diabetes	bilateral	yes	gradual onset, restricted eye movements, visual acuity was 6/9 and 6/12 in right and left eyes	insulin	no	complete recovery
37 <sup>33</sup>	m	47	Injection of heroin intraorbital	unilateral	no	decreased vision, ophthalmoplegia, proptosis, and chemosis	antibiotics	no	complete recovery
38 <sup>34</sup>	f	78	idiopathic orbital inflammatory disease	unilateral	no	proptosis, RAPD, chemosis	high-dose oral steroids and anticoagulants	yes	complete recovery

39 <sup>35</sup>	m	59	carotid-cavernous fistula	unilateral	no	no information	none/spontaneous cure	no	complete recovery
40 <sup>35</sup>	f	52	carotid-cavernous fistula	unilateral	no	orbital signs	none/spontaneous cure	no	complete recovery
41 <sup>35</sup>	m	75	carotid-cavernous fistula	unilateral	no	orbital signs	none/spontaneous cure	no	complete recovery
42 <sup>36</sup>	f	37	dural arteriovenous fistula of cavernous sinus, gamma knife radiosurger	unilateral	yes	increasing proptosis and vision deterioration in her left eye		no	complete recovery
43 <sup>37</sup>	m	71	left-sided dacryocystitis-induced orbital cellulitis	unilateral	yes	progressive left orbital swelling	dacryocystorhinostomy, antibiotics, dexamethasone,	no	complete recovery
44 <sup>38</sup>	f	58	Sphenoid sinusitis	Unilateral	no	severe right eye pain, periorbital swelling and erythema	antibiotics, dexamethasone, drainage of sphenoid sinus	no	complete recovery
45 <sup>39</sup>	m	50	carotid-cavernous fistula	Unilateral	no	proptosis, visual acuity 20/200	no information	no information	no follow up
46 <sup>40</sup>	m	37	idiopathic	unilateral	no	loss of vision (3 fingers at 3 inches). RAPD, retinal whitening of the macula, mild optic disc swelling, dilated retinal veins	anticoagulation therapy	yes	no information
47 <sup>41</sup>	m	37	dental infection, pansinusitis	unilateral	no	20/20 in both eyes. Right; proptosis and ptosis, limited abduction	antibiotics	no	complete recovery
48 <sup>42</sup>	f	36	oral contraceptive pill, raised factor VIII level.	bilateral	no	bilateral red, swollen and prominent eyes. Extraocular movements were full. Bilateral proptosis	cessation oral contraceptives, aspirin treatment	yes (aspirin)	complete recovery
49 <sup>43</sup>	f	80	orbital cellulitis, ethmoid sinusitis	unilateral	no	painful, red, proptosed right eye with diplopia progressing over 4 days	antibiotics, anticoagulation therapy	yes (enoxaparin)	recovery of proptosis and visual acuity. 2 wks later she died due to massive retroperitoneal haemorrhage
50 <sup>44</sup>	f	62	posttraumatic carotid-cavernous fistula	bilateral	no	proptosis, chemosis	none/spontaneous cure	no	complete recovery of ocular symptoms
51 <sup>45</sup>	m	20	orbital cellulitis and ethmoidal sinusitis	unilateral	no	fever, right orbital pain, and periorbital swelling, limited extraocular movements, proptosis, intact visus	antibiotics, orbital drainage via external ethmoidal approach	no	complete recovery
52 <sup>46</sup>	f	45	Minestrine (hormone therapy for menopause)	unilateral	yes	right sided visual loss (20/30), proptosis, eye lid swelling	cessation of minestrine	no	complete recovery

53 <sup>47</sup>	f	73	tamoxifen for breast cancer	unilateral	no	proptosis, visual acuity 6/9	cessation of tamoxifen	no	No ocular symptoms after discontinuation Tamoxifen
54 <sup>48</sup>	f	42	use of oral contraceptives	unilateral	no	chronic proptosis of right eye (1 year), elevated intraocular pressure, chemosis	cessation oral contraceptives, timoptol eye drops	no	complete recovery
55 <sup>49</sup>	m	15	Pansinusitis	unilateral	yes	right proptosis, chemosis, ptosis, ophthalmoplegia, cranial nerve palsies, and paresthesia	endoscopic sinus surgery, antibiotics, anticoagulant treatment	yes (heparin)	no information (no full tekst)
56 <sup>50</sup>		1,5	idiopathic	unilateral	no	proptosis	antibiotics, steroids	no	complete recovery
57 <sup>51</sup>	m	58	idiopathic	unilateral	no	ptosis, decreased vision (0,7). Proptosis, limited eye movements, disc edema	no treatment, spontaneous cure within one month.	no	complete recovery
58 <sup>51</sup>	f	53	idiopathic	unilateral	yes	diplopia, visual acuity 0,1	steroids (prednisolone)	no	visual acuity 100%, slight abducent nerve palsy
59 <sup>51</sup>	m	63	idiopathic	unilateral	no	proptosis	trabeculectomy surgery	no	proptosis
60 <sup>52</sup>	f	58	Tolosa-Hunt syndrome	unilateral	no	diplopia, visual acuity 20/40 (left side), limited eye movements	corticosteroids	no	complete recovery

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