

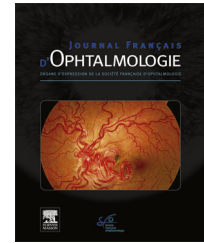


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SFO COMMUNICATION

Frequency of prepapillary vascular loops in Congolese patients[☆]

Fréquence des anses vasculaires papillaires chez les patients congolais

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KEYWORDS

Prepapillary vascular loops;
Frequency;
DR Congo;
Refraction;
Black race;
Central Africa

Summary

Purpose. – To determine the frequency of prepapillary vascular loops in the population of Congolese patients.

Methods. – We performed a retrospective cross-sectional and descriptive analysis of the data collected between January 2005 and August 2014 from patients diagnosed with prepapillary vascular loops, in an outpatient eye clinic, a general ophthalmology practice.

Results. – Out of 16,016 patients seen during the study period, 24 patients (27 eyes) were diagnosed with prepapillary vascular loops, for a frequency of 0.15%. The mean age of the patients with prepapillary vascular loops was 37.8 years \pm 14 (SD) (range, 18 to 60 years). Male were more frequently diagnosed with prepapillary vascular loops than female (62.5% vs 37.5%). Unilateral prepapillary vascular loops were found in 77.8% and bilateral in 22.2% of eyes. Most of PPLs were estimated to be arterial (88.9% of eyes) based on clinical observation alone, as fluorescein angiography was not systematically performed. Ophthalmoscopically, the vessels appeared as simple (44.6%) or took more serial turns (corkscrew or spiral-shaped) (55.6%). The average length of PPLs was 1.02 mm (range 0.6 to 1.5 mm) with an orientation (an axis orientation) in the superior nasal sector (50%), inferior nasal sector (33%) and superior temporal sector (17%); and a mean axis of 143° relative to the horizontal. Refractive errors were found in 16 eyes (59.3%) and included simple myopia (4 eyes, 14.8%), myopic astigmatism (8 eyes, 29.6%), hyperopic astigmatism (one eye, 3.7%), hyperopia (3 eyes, 11.1%); One patient (one eye, 3.7%) with high hyperopia had anisometropia. Primary open angle glaucoma was found in 5 (18.5%) eyes; vascular tortuosity was seen in two (7.4%) eyes. No complication such as retinal arterial occlusion, vitreous hemorrhage, or any other complication was found.

[☆] Le texte a fait l'objet d'une présentation orale lors du 121^e congrès de la Société française d'ophtalmologie à Paris.

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Conclusion. – The frequency of 0.15% found in this study suggests that although rare, prepapillary vascular loops seem to be a bit more common in black people than in white and Asian people. An association between PPLs and refractive errors may be possible.

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MOTS CLÉS

Anses vasculaires
prépapillaires ;
Fréquence ;
République
démocratique du
Congo ;
Race noire ;
Afrique centrale

Résumé

But. – Déterminer la fréquence des anses prépapillaires (APP) chez les patients congolais.

Méthodes. – Durant la période allant de janvier 2005 à août 2014, nous avons réalisé une étude transversale et descriptive des données des patients avec diagnostic d'APP, dans une clinique d'ophtalmologie générale.

Résultats. – Sur un total de 16 016 patients examinés durant la période d'étude, 24 patients (soit 27 yeux) avaient un diagnostic d'APP, ce qui donne une fréquence relative de 0,15 %. L'âge moyen des patients avec APP était de 37,8 ans \pm 14 (intervalle, 18 à 60 ans). Les APP ont été diagnostiquées plus chez les hommes que chez les femmes (62,5 % vs. 37,5 %). L'atteinte a été unilatérale dans 77,8 % et bilatérale dans 22,2 %. La majorité des APP étaient classées artérielles (88,9 %) sur base de l'ophtalmoscopie. Les APP sont apparues simples (44,6 %) ou en tournevis (55,6 %). La longueur moyenne des APP a été de 1,02 mm (intervalle, 0,5 à 1,5 mm) avec une orientation dans le secteur nasal supérieur (50 %), dans le secteur nasal inférieur (33 %) et dans le secteur temporal supérieur (17 %) ; et un angle d'orientation de 143° par rapport à l'horizontale. Des vices de réfraction ont été retrouvés dans 16 yeux (59,3 %) et comprenaient une myopie simple (4 yeux, 14,8 %), un astigmatisme myopique (8 yeux, 29,6 %), un astigmatisme hypermétropique (un œil, 3,7 %) et une hypermétropie (3 yeux, 11,1 %). Un patient (un œil, 3,7 %) avec une hypermétropie forte a présenté une anisométrie. Le glaucome primitif à angle ouvert et la tortuosité des vaisseaux ont été retrouvés respectivement dans 5 yeux (18,5 %) et deux yeux (7,4 %). Aucune complication genre occlusion artérielle, hémorragie du vitré ou autre complication n'a été retrouvée (associée).

Conclusion. – La fréquence d'APP de 0,15 % trouvée dans notre étude, suggère que bien que rare, l'affection semble être un peu plus fréquente chez les mélanodermes que chez les Caucasiens ou les Asiatiques. L'association entre vices de réfraction (astigmatisme) et APP pourrait être possible.

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Introduction

Prepapillary vascular loops (PPLs) are congenital abnormalities (anomalies) characterized as blood vessels that project from the optic disc into the vitreous cavity and then return to the disc to continue their natural course [1]. Described for the first time by Liebrich in 1871 [2], PPLs formations are uncommon congenital vascular malformations and the majority is of arterial origin [3]. Although cases of PPLs have been reported in Caucasians and Asians [3–15], there is no data available on prevalence of PPLs in black Africa. The purpose of the study was to determine frequency of PPLs in Congolese patients from Central Africa.

Material and methods

We performed a cross-sectional and descriptive analysis of the data of the patients with PPL diagnosis. Data were collected between January 2005 and August 2014 in an outpatient eye clinic, a general practice of ophthalmology.

The study was conducted according to the Helsinki Declaration. Patients received a complete ophthalmic examination which included visual acuity, refraction, slit-lamp examination of the anterior segment, Goldmann applanation tonometry, and indirect ophthalmoscopy. The refraction was determined by an objective refraction by automated refraction (using a Topcon RM 2000) that was refined by subjective refraction using a trial lens set. Because of the age of the study population, cycloplegia was not used for refraction. All refractive errors were converted to the spherical equivalent diopters by adding the spherical component of refraction to half of the cylindrical component. For this report, myopia was defined as a refractive error less than -0.50 D; hyperopia was defined as a refractive error greater than $+0.50$ D and emmetropia was defined as refractive error between $+0.50$ and -0.50 D. After a complete examination, the pupils were dilated with tropicamide 0.5% and phenylephrine 10% for funduscopy. The diagnosis of PPLs was based on ophthalmoscopic findings. The figure shows a fundus photograph of a PPL in the right eye of one patient.

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