SEX-GENDER DIFFERENCES IN DIABETIC RETINOPATHY **ATTD 2018 8-0306**

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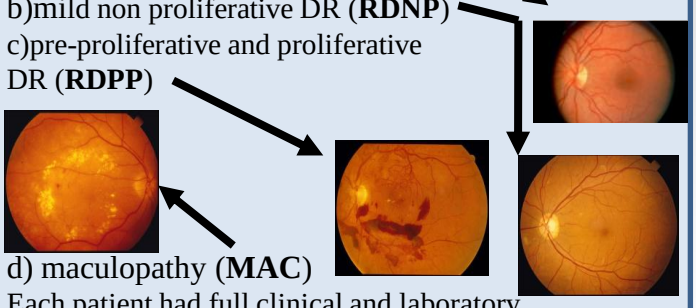
Introduction

Diabetic retinopathy (DR) is one of the main causes of visual loss in individuals aged 20-64 years old. Some evidence indicate clear sex gender differences in diabetes complications, but studies focused on sex-gender differences in DR do not give clear data.

The **aim of this study** was to investigate sex gender Difference in DR type 2 diabetic patients (T2DM) .

Materials and Methods

During 2015-2017 in seven diabetic out- patient clinics in Sardinia we examined under midriatic funduscopy 19.951 (11.409 males, 8.542 females) T2DM with known diabetes duration more than 5 years. Patients were classified as having: a) No DR (**NRD**) b)mild non proliferative DR (**RDNP**) c)pre-proliferative and proliferative DR (**RDPP**)



d) maculopathy (**MAC**)

Each patient had full clinical and laboratory data available. In the same period in three diabetic outpatient clinics (Olbia, Nuoro and Cagliari) we performed also non midriatic retinography in other 1916 T2DM, during the outpatient visit, using a semi automated digital funduscamera: each imagine was evaluated by an experienced diabetologist/oculist.

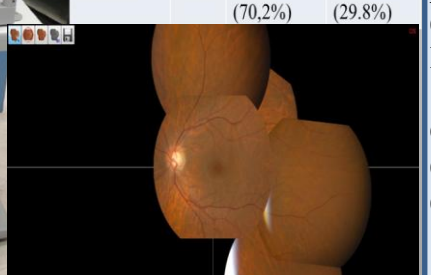
Resuts midriatic fundoscopy

SEX	NDR	RDNP	RDPP	MAC
MALE	8559 (75.0%)	1809 (15.9%)	575 (5.0%)	466 (401%)
FEMALE	6578 (77.1%)	1223 ** (14.3%)	347 *** (4.0%)	394 (4.6%)
TOTAL	NDR	RDNP	RDPP	MAC
19951 (100%)	15137 (75,9%)	3032 (15.2%)	922 (4,6%)	860 (4,3%)

*P<0.05,**P<0.01,*** P<0.001 male vs female

Resuts retinography

CENTER	N	NEGATIVE	POSITIVE
OLBIA	613	457 (74.5%)	156 (25.4%)
NUORO	584	480 (82.1%)	104 (17.8%)
CAGLIARI	719	408 (57.0%)	311 (43.0%)
TOTAL	1916	1311 (70,2%)	571 (29.8%)



Results for any single diabetic out-patient unit

1 Sex	NDR	RDNP	RDPP	MAC
Male	1606 74.5%	380 17,6%	81 3,8%	90 4,2%
Female	1080 76,2%	236 16,7%	40 2,8%	61 4,3%

2 Sex	NDR	RDNP	RDPP	MAC
Male	330 78.6%	82 19.5%	8 1,9%	2 0.5%
Female	282 82.0%	54 15,7%	8 2,3%	0 0%

3 Sex	NDR	RDNP	RDPP	MAC
Male	2673 64.9%	596 14.5%	332 8,1%	158 3,8%
Female	1993 63,3%	375 11.9%	193 6.1%	124 3.9%

4 Sex	NDR	RDNP	RDPP	MAC
Male	1112 79%	192 13,6%	40 2,8%	63 4,5%
Female	1080 81,5%	171 12,9%	40 3,0%	71 5,4%

5 Sex	NDR	RDNP	RDPP	MAC
Male	801 77.8%	175 17,0%	33 3,2%	21 2,0%
Female	608 78,4%	117 15,1%	25 3,2%	26 3,3%

6 Sex	NDR	RDNP	RDPP	MAC
Male	1110 82,6%	161 12%	35 2,6%	37 2,8%
Female	842 84,7%	101 10,2%	18 1,8%	33 3,3%

7 Sex	NDR	RDNP	RDPP	MAC
Male	927 71,8%	223 17,3%	46 3,6%	95 7,4%
Female	693 71,9%	169 17,5%	23 2.3%	79 8,2%

Conclusions

Our preliminary results indicate that :

a) females have significantly less DR than male ($p<0.00001$), this effect is evident also excluding Unit 3 $p=0.0002$

b) In this large sample of T2DM with known diabetes duration more than 5 years, DR is present in 24.1% of the subjects, with unit 3 having the highest prevalence (27.6%) and unit 6 the lowest (16.5%) : $P<0.00001$

c) retinography may allows to exclude DR in almost 68% of T2DM patients during scheduled out-patient visit at the diabetes centre, avoiding the more expensive classical oculist assessment.

In Sardinia (about 110.000 diabetic patients) this would mean a yearly save of about 1,496,000 euro considering a yearly oculist examination and 748,000 euro considering the possibility of oculist examination every two years.

Further analysis is under way in order to identify possible markers of sex gender difference in DR

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