

Mapping of dental fluorosis in non-phosphate regions in Morocco

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Introduction: Morocco is known as an endemic area of fluorosis. The high prevalence also called "dar-ghmous" is strongly linked to phosphate deposits. However, there are cases of fluorosis in other non-phosphate areas and in other unknown fluorotic areas.

Materiels and methodes

Primary objectif : Identify the etiological factors of dental fluorosis in school populations living in non-phosphate regions

Study type:

Cross-sectional descriptive study

Population :

2750 Moroccan schoolchildren living in the 12 regions

Inclusion criterias

3 to 21 years old

Residents since their early childhood in these regions

Affected by dental fluorosis to varying degrees.

Variables studied:

The amount of water consumed ,
The amount of tea consumed ,
The amount of fish eaten
and The prevalence of fluorosis

Results and discussion

	Er-Rachidia	Guelmim	Sidi slimane	Bouarfa	El jadida	Taounate	khemisse t	Ouarzazate	Al hociema	Taza	khenifra	Rabat
fluorosis prevalence %	99	79	70	99	87,5	81,26	85,07	86	85	93	85	27

Prevalence of fluorosis according to water consumption

	Al hociema	Taza	Bouarfa	Er-Rachidia	Ouarzazate	khenifra	Taounate	Sidi slimane	khemisset	Guelmim	El jadida	Rabat
0,5L-1 L/j	81	92,4	82	92	84	99,6	74,55	93,5	81,7	74,57	90	70
1-2 L/j	91,8	90,9	96,5	100	90	92,4	84,8	96,5	88,4	63	86	92,2

Prevalence of fluorosis according to tea consumption

	Al hociema	Taza	Bouarfa	Er-Rachidia	Ouarzazate	khenifra	Taounate	Sidi slimane	khemisset	Guelmim	El jadida	Rabat
1-3 glass/day(%)	88,8	54,55	100	84	50	96	83,2	95	80,4	85	0	90
3-6 glass/day(%)	81	54,55	99,5	94,5	95,5	97,6	90	98,7	98,4	86	72,5	74
more than 6 glass/day(%)	100	95,45	100	100	100	99,2	93	100	100	96	87	98,2

Prevalence of fluorosis according to fish consumption

	Al hociema	Taza	Ouarzazate	khenifra	Taounate	El jadida	Rabat
<1 T/week (%)	93	88,5	88	96,4	80	75,6	53,7
1 T/week (%)	95	100	84,6	96,4	94	90,3	79,5
>1 T/week (%)	99	100	83,3	98	97	100	94,7

Conclusion

The presence of foci of fluorosis in areas not known to be fluorotic may be related to:

- consumption of well water highly concentrated in fluorine +++
- Presence of associated dietary factors: ++
- high consumption of tea, fish
- hot climates

The mapping of fluorosis in Morocco:
Phosphate zones +++
Non-fluorotic areas +