RESOLUÇÃO 307 REVISÃO

RESÍDUOS CONTENDO AMIANTO

EFEITOS À SAÚDE ? ? ? ?

Milton do Nascimento 08-2010

RESOLUÇÃO 307 REVISÃO

AS DOENÇAS

Fatores de importância na gênese das doenças

1 - Tamanho das fibras

Fibra respirável = C > 5µm D < 3µm 3:1

CONCEITO DE DOSE

2 - Concentração de fibras/ cm^3

3 - Tempo de exposição

4 - Relação com o fumo

5 - Sensibilidade individual

6 - Mecanismo de defesa do pulmão

RESOLUÇÃO 307 REVISÃO

AS DOENÇAS

DOSE NECESSÁRIA

Asbestose

25 fibras/ano * ⇨ OR 1,94

Câncer de pulmão

Mesotelioma **Low-level nonoccupational exposure is not significant contributor to MM incidence.****

* Helsinki Consensus Report, 1997

** Bertram Price, Adam Ware in Asbestos and Its Diseases, 2008, pg 376

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AS CONCENTRAÇÕES DETECTADAS NÃO LEVAM À DOSE SUFICIENTE AO DESENVOLVIMENTO DE DOENÇAS

RESOLUÇÃO 307 REVISÃO

ENVIRONMENTAL HEALTH CRITERIA 203

10. Conclusions and recommendations…

a) **Exposure to chrysotile asbestos poses increased risks for asbestosis, lung cancer and mesothelioma in a dose-dependent manner.**

No threshold has been identified for carcinogenic risks.

RESOLUÇÃO 307 REVISÃO

Epidemiology and Risk Assessment

Graham W Gibbs and Geoffrey Berry *
Threshold of Risk - Mesothelioma

"... It is highly improbable that there is a finite risk at close to zero exposure and it seems reasonable to conclude that thresholds exist."

* Asbestos and Its Diseases, 2008, pg 107

RESOLUÇÃO 307 REVISÃO

Epidemiology and Risk Assessment

Graham W Gibbs and Geoffrey Berry *

Risk at Low Exposure - Mesothelioma

"... In the case of chrisotile, the MM risk for the general population even in a community where even today persons are nonoccupatgionally exposed to chrysotile (Marier et. Al., 2007), is absent or nondetectable."

* Asbestos and Its Diseases, 2008, pg 112

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Epidemiology and Risk Assessment

Chrysotile and mesothelioma

"At present day levels of exposure to commercial chrysotile, whether or not contaminated with tremolite, the risk must be vanishingly small"

JC & AD McDonald 1997

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Worldwide mesothelioma mortality trends
Harvard Symposium 24th July 2009

Julian Peto
London School of Hygiene and Tropical Medicine
and
Institute of Cancer Research

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Asbestos lung burdens (fibres > 5µ) in patients with mesothelioma, lung cancer and pneumothorax

Million fibres per gram (TEM)	Mesothelioma patients	Lung cancer patients	Pneumothorax patients	
			Born <1970	Born ≥ 1970
	n (%)	n (%)	n (%)	n (%)
<0.025	12 (29.3%)	28 (65.1%)	21 (70.0%)	20 (95.2%)
0.025-0.200	13 (31.7%)	13 (30.2%)	9 (30.0%)	1 (4.8%)
≥0.200	16 (39.0%)	2 (4.7%)	0	0
Total	41	43	30	21

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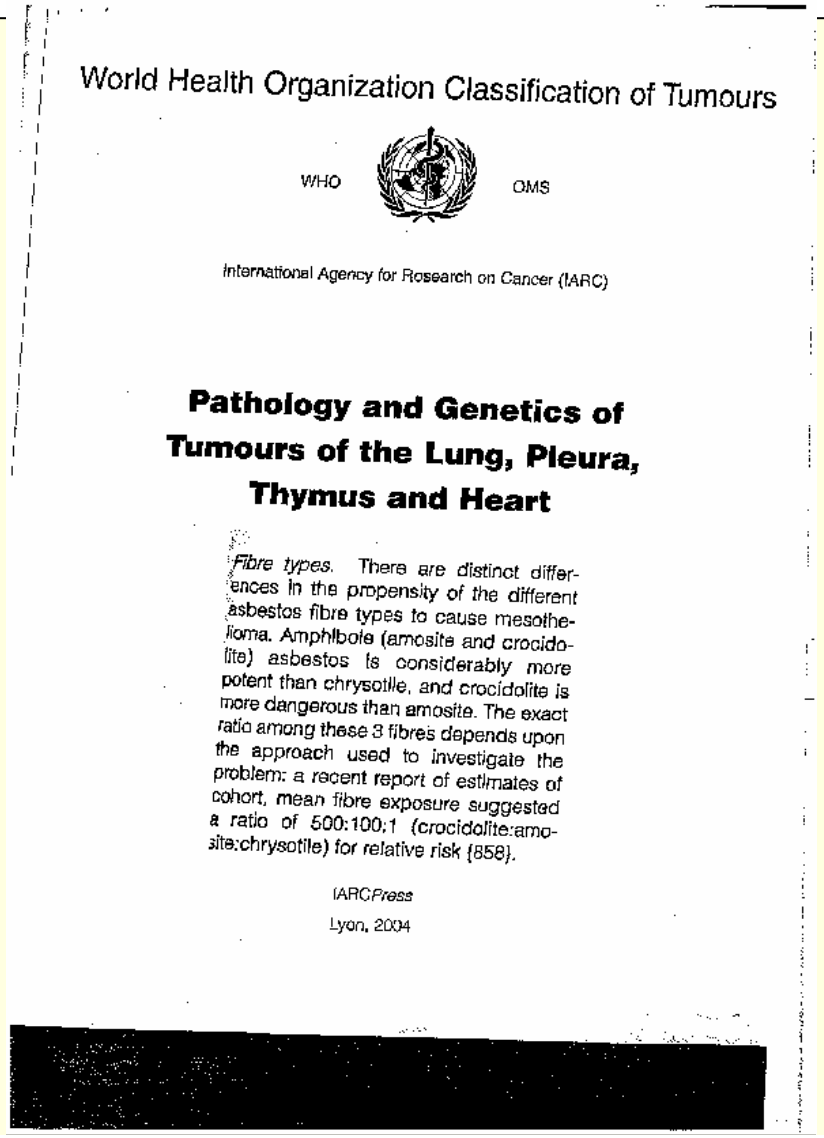
Epidemiology and Risk Assessment

Chrysotile and mesothelioma

The quantitative risks of mesothelioma and lung cancer in relation to asbestos exposure
Hodgson & Darnton (2000) Ann. Occup. Hyg. 44:565-601

"The exposure specific risk of mesothelioma…….is broadly in the ratio 1:100:500 for chrysotile, amosite and crocidolite respectively."

OMS – IARC Crisotila x Anfibólios



World Health Organization Classification of Tumours

WHO OMS

International Agency for Research on Cancer (IARC)

Pathology and Genetics of Tumours of the Lung, Pleura, Thymus and Heart

Fibre types. There are distinct differences in the propensity of the different asbestos fibre types to cause mesothelioma. Amphibole (amosite and crocidolite) asbestos is considerably more potent than chrysotile, and crocidolite is more dangerous than amosite. The exact ratio among these 3 fibres depends upon the approach used to investigate the problem: a recent report of estimates of cohort, mean fibre exposure suggested a ratio of 500:100:1 (crocidolite:amosite:chrysotile) for relative risk [858].

IARC*Press*

Lyon, 2004

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Conclusão: **Em razão de:**

- **Exposições não ocupacionais, em especial relacionadas a resíduos contendo amianto, não satisfazerem o conceito de dose para o desenvolvimento de doenças;**

- **A necessidade de exposição significativa para o desenvolvimento do mesotelioma;**

- **O baixo risco associado a exposição ao amianto crisotila.**

- **Entende o IBC não haver suporte científico para a classificação de residuos contendo amianto ligado como perigosos**