

RADIOLOGICAL EXAMINATIONS WITH NEGATIVE RESULTS IN HOSPITALS OF LIMA – 2010

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**2. Introduction.** There is concern in the world for the increase on patients exposure to IR and its excessive use. The World Health Organization (WHO) and the International Atomic Energy Agency (IAEA) have stated today that the medical diagnosis has misused the ionizing radiation, making an extensive use of it. The conclusions from Seminario y col. (2008) and the research “Exposición a la radiación ionizante por motivos médicos en la población de Lima y Callao”, (Exposure of patients to ionizing radiation for medical reasons in Lima and Callao) done by the same team and made known at the “Encuentro de Interfacultades de profesores e investigadores de la UNFV”, which was organized by the Oficina Central de Investigación – OCI (2009), tell us that 72.3% of the patients were exposed to ionizing radiation. The group with larger number of exposures, with 345 patients, was that from 18 to 27 years old. This arises the worry from the Jury who was to evaluate, over the real need of the exposures. As a consequence, it was suggested, an inquire to know whether the use of ionizing radiation is justified or not, this will interested not only all medical areas but also the management and educational areas, to know what is the percentage of negative results from the radiological examinations in three hospital of Lima – 2010.

**3. Method.** A cross-sectional, descriptive and prospective study.

**Participant.** Three of the main hospitals of Lima and Callao 2010.

**Sample.** The total results from radiological examinations of patients to whom an exam in the radiological services of the hospitals, on a fixed day, were taken with the purpose of using them for the present inquire.

**Results**

Table 1. Exams taken at the three hospitals.

Exams	Institución			Total
	HNERM	HNHU	HNDAC	
Digestive	7	1	0	8
Gynaecological	5	2	0	7
Thorax	296	119	80	495
Bony	189	74	67	330
Abdomen	22	10	11	43
Urology	10	0	2	12
Mammography	35	1	10	46
Tac Brain	80	3	21	104
Tac Abdominal	67	2	3	72
Tac-pelvic	52	1	0	53
Tac tórax	49	1	0	50
Tac-otherc	58	6	0	64
Arteriography	0	1	0	1
Biopsy	4	0	0	4
Embolyzations	1	0	0	1
Cavography	1	0	0	1
Nephrostomy	2	0	0	2
Catheters	2	0	0	2
Pancreatography	3	3	0	6
Heart catheters	3	0	0	3
Angioplasty	2	0	0	2
Total	888	224	194	1306

Table 2. Exams and results by hospitals.

Exams and Results	HNERM		HNHU		HNDAC		TOTAL					
	N	P	NR	R	N	P	NR	N°				
Conventional	264	204	54	7	108	97	1	133	27	0	895	68,5
Interventional	0	18	0	0	1	3	0	0	0	0	22	1,7
Mammograms	15	16	4	0	1	0	0	9	1	0	46	3,5
Computed Tomography	83	222	1	0	5	8	0	14	10	0	343	26,3
TOTAL	362	460	59	7	115	108	1	156	38	0	1306	100

Table 3. Table of contingency Institution \* Result

Institution	Negative		Positive		No report		To repeat		TOTAL	
	N°	%	N°	%	N°	%	N°	%	N°	%
HNERM	362	40.7	460	52	59	6.6	7	0.7	888	100
HNHU	115	51.3	108	48.2	1	0.5	0	0	224	100
HNDAC	156	80.4	38	19.6	0	0	0	0	194	100
Total	633	---	606	---	60	---	7	0.4	1306	

**Conclusions:**

- Total exams at the three hospitals 1,306.
  - At the HNERM 888 exams: conventional radiology 529, interventional radiology 18, mammograms 35, computed tomography 306.
  - At the HNHU 224 exams: conventional radiology 206, interventional radiology 4, mammograms 1, computed tomography 13.
  - At the HNDAC 194 exams: conventional radiology 160, interventional radiology 24, mammograms 10, computed tomography 24.
  - Negative results at the HNERM: conventional radiology 50.6%, interventional radiology 0%, mammograms 42.8%, computed tomography 27.1%, meaning 40.7% of the total exams.
  - Negative results at the HNHU: conventional radiology 52.4%, interventional radiology 25%, mammograms 100%, computed tomography 38.5%, meaning 51.3% of the total exams.
  - Negative results at the HNDAC: conventional radiology 83%, interventional radiology 5%, mammograms 90%, computed tomography 58.3%, meaning 80.4 % of the total exams.
- The average percentage of negative results were as higher as 48,7% of all examinations which reflected the unjustified exposure of patients. As a consequence there is a need for taking actions addressed to avoid the unnecessary explorations. These actions must engage the physicians and also the using of some guidance as the Protection Guide against Radiation and others from international organizations, e.g. WHO or IAEA.