

CATHPAX® radiation protection cabin

No radioprotective clothing required



A revolution in radiation protection

Total protection. A veritable barrier against direct and scattered x-rays. **CATHPAX®** protects the operator from ionising radiation.

Operator comfort. No more heavy, restrictive, stifling radioprotective clothing. **CATHPAX®** provides unprecedented comfort for operators working in an x-ray environment.

Greater efficiency. Operators experience less fatigue, and their movements are less restricted and more precise. **CATHPAX®** improves operator efficiency.

Free at last. No more time wasted putting on and removing protective clothing, no more cumbersome restrictive equipment. With **CATHPAX®**, operators are free at last.



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An x-ray procedure performed at the Haut-Lévêque hospital in Bordeaux, using the new CATHPAX radiation protection cabin.

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“Use of a novel Radiation Protection Cabin during catheter ablation procedures obviates the need for lead protective apparel”

Rukshen Weerasooriya, Michel Haissaguerre, Sylvain Fanier, Pierre Jais, Meleze Hocini, Christophe Scavee, Laurent Macle, Florence Roybaud, Li-Fern Hsu, Prashantan Sanders, Steve Sagon, Pierre-Marie Lemer, Hôpital Haut-Lévêque

Invasive prolonged cardiac electrophysiology involves considerable radiation exposure to the operator and the use of radiation protection apparel (apron, spectacles, collar) results in operator discomfort while leaving some of the body surface unprotected. A radiation protection cabin (RPC) Lemer Pax - www.lernerpax.com - was designed using 2 mm lead equivalent walls, including transparent leaded plastic, to surround the operator.

The cabin is mobile, adjustable in height and prepared with sterile drapes with patient access via anterior arm holes. We prospectively compared operator radiation exposure using the RPC versus a conventional 0.5 mm lead equivalent apron.

Methods

In 81 consecutive catheter ablation procedures, operators used conventional lead apparel (APRON) or the RPC alone. A non-pulsed fluoroscopic system was used with exclusive anteroposterior projection in 95 % of cases. Personal electronic dosimeters were positioned on the operator at the waist (inside lead apron in APRON group) and at exposed face to determine conventionally protected body and 'exposed' facial radiation exposure, respectively.

Results

Using the RPC, radiation exposure was significantly less at the exposed and protected body underneath the lead apron. There were no significant differences in procedure duration. The RPC offers obvious advantages in operator comfort (sweating, tiredness) without impairing catheter manoeuvrability.

Conclusion

With use of the RPC, catheter ablation procedures can be performed comfortably with negligible radiation exposure which may be further reduced using improved fluoroscopy rendering lead apparel superfluous.

Professor Michel Haissaguerre
Haut-Lévêque hospital in Bordeaux



Principle

The CATHPAX® mobile radiation protection booth protects the operator from radiation during x-ray procedures.

CATHPAX® eliminates the need for protective goggles and apparel.

Data sheet

- 2 mm lead equivalent leaded glass
- 2 mm lead shielded cabin frame
- Removable, autoclavable armhole ports
- Flexible, protective sleeve
- Optional flexible protective curtain mounted on a jointed arm to shield the operator's back (not shown)
- Height-adjustable arm holes
- Removable leaning bar for the operator
- 200 mm diameter wheels for easy manoeuvrability of the shield
- Disposable sterile drape kit

Résultats - Atrial Fibrillation Subset*

	APRON (43 cases)	RPC (38 cases)
Procedure time (mins)	181 ± 77	168 ± 45
Fluoroscopy time (mins)	57 ± 30	46 ± 15
Body radiation (micro SV)	3.0 ± 2.2	1.7 ± 0.8
Face radiation (micro SV)	102 ± 23	2.3 ± 2.0*

Mean ± standard deviation *p < 0.01



The CATHPAX® cabin revolutionizes working conditions for x-ray imaging procedures by totally blocking ionising radiation and allowing the operator freedom of movement. The greatest radiation protection innovation in years.

The CATHPAX® radiation protection cabin was developed with the participation of the University Medical Centre of Bordeaux.

