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Paper Poster Session

MRSA - one health worldwide

Trends in methicillin-resistant *Staphylococcus aureus* control in Italy 2009-2014: the ProSA1 and ProSA2 surveys

Angelo Pan*¹, Enrico Bombana², Grazia Antonella Tura³, Cesarina Curti⁴, Placido Mondello⁵, Marcello Meledandri⁶, Marcello Mario D'errico⁷, Antonio Goglio²

¹*Istituti Ospitalieri DI Cremona, Infectious Diseases, Cremona, Italy*

²*Ospedale Papa Giovanni XXIII, Bergamo, Italy*

³*Ospedale Degli Infermi, Rimini, Italy*

⁴*Simplos, Milano, Italy*

⁵*Azienda Ospedaliera Universitaria G Martino, Messina, Italy*

⁶*Ospedale San Filippo Neri, Roma, Italy*

⁷*Università Degli Studi DI Ancona, Ancona, Italy*

Background: MRSA has been endemic in many countries, including Italy, for many years. MRSA control guidelines have been available in the literature for over 2 decades and many hospital worldwide have implemented local recommendations to control MRSA health-care associated infections. In Italy, national guidelines have been published in 2011. A national survey was performed before national guidelines were available, in 2009. A second survey was done in 2014, after the introduction of national guidelines. We here report the data of the two surveys and the trends in MRSA control in Italy.

Material/methods: A closed answer questionnaire was sent in 2009 to all Italian hospitals (ProSA 1), while a second one was sent to the members of the Italian Society of Infection Control (SIMPIOS) and to the responders of the first survey in 2014 (ProSA 2). The questionnaire analysed: general characteristics and infection control, MRSA control, hand hygiene, antimicrobial stewardship, microbiological data. The coordinating committee received, recorded, and elaborated the questionnaires. An adherence evaluation to the Italian MRSA bundle was performed on (1) hand hygiene, (2) contact precautions, (3) surveillance, (4) screening high risk patients, (5) decolonization, and (6) antimicrobial stewardship program (ASP). Chi square test was used to analyse the differences between the 2 surveys.

Results: In 2009 we received 205 questionnaires, representing 16.8% of the 1217 Italian hospitals, in 2014 we received 72 questionnaires (5,9%of hospitals). 74/205 hospitals (36%) had written guidelines in 2009 as compared to 48/72 (67%) in 2014. The results in the ProSA1 and ProSA 2 studies were as follow: (1) hand hygiene program was ongoing: 95/205 (46%) vs. 55/72 (76%) hospitals; (2) indications to isolate MRSA positive patients in contact precautions: 33/205 (16%) vs. 34/72 (47%) ($p < 0.0001$); (3) analysis and feed back of surveillance data: 87/205 (43%) vs. 55/72 (76%) ($p < 0.0001$); (4)

screening for MRSA in high risk wards and/or patients: 66/205 (32%) vs. 37/72 (51%) ($p= 0.006$); (5) MRSA decolonization: 42/205 (20%) vs. 36/72 (50%) ($p< 0.0001$); (6) ongoing ASP: 41/205 (20%) vs. 18/72 (20%) ($p= 0.52$). Regarding the overall compliance – ProSA1 vs. ProSA2: 1/205 (0.5%) vs. 7/72 (10%) was compliant with all indications, while in 59/205 facilities (29%) vs. 2/72 (3%) no intervention has yet been organized. Thirteen/205 hospitals (6%) vs. 10/72 (14%) adhered to 5 indications, 15/205 (7%) vs. 12/72 (17%) to 4, 39/205 (19%) vs. 19/72 (26%) to 3, and 78/205 (39%) vs. 23/72 (32%) to 1 or 2.

Conclusions: The level of adherence to MRSA guidelines in Italy improved significantly over the period 2009-2014. The hospitals with a well organized system, adhering to at least 4 interventions recommended by the Italian MRSA bundle, increased from 14% to 41%. No significant improvement was observed for ASP.